A MANUAL

CONTAINING THE

COURSE OF STUDY

FOR THE

Elementary Schools of West Virginia

Revised Edition—1914.

Prepared by
THE STATE BOARD OF EDUCATION
And issued by
THE DEPARTMENT OF FREE SCHOOLS
M. P. Shawkey, State Superintendent
Charleston

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INTRODUCTORY.

In 1908 the State Legislature passed an act creating a State Board of Education. One of the duties of this Board is to prepare and publish a State Course of Study for Elementary and High Schools. In compliance with this statute the Board prepared and issued in 1909 a Manual of the courses of study for both elementary and high schools in a single volume. In 1912 the Board revised the courses of study for both elementary and high schools, but issued separate manuals for these two kinds of schools. This manual is a revision, in 1914, of the elementary manual issued in 1912.

For the sake of convenience of references this manual is divided into three sections. Section I contains several special articles written by individual members of the Board and the Daily Program of Studies. Section II contains an Outline of Studies by grades, indicating the text-book to be used, and the amount of each to be completed each year, or half-year. Section III contains a detailed outline of studies by subjects. For immediate reference Section II will be sufficient; but questions as to *how to teach* any given subject, and just *what to teach,* will be answered in Section III. Throughout Section II references are frequently made to Section III. Teachers are urged to study Section III as a text on pedagogy; for in this section most of the questions that confront the teacher in her daily class work are answered. For the next year or two, at least, the examination for renewal of teachers' certificates and some of the questions on Theory and Art in the State Uniform Examinations will be taken from this manual.

SECTION I

Special Articles and Daily Program of Studies.

RURAL SCHOOL EQUIPMENT.

We will assume that your school has ample grounds, a good house with outbuildings, pure drinking water within easy reach, suitable desks for the pupils and a desk and a chair for the teacher, and that it has suitable means of heating and ventilating the room, that fuel, chalk, erasers and brooms are furnished. This list completes what boards are accustomed to think necessary equipment for a school. Some schools do not fare even so well as this. But granted this much, what can the teacher do towards better equipment of her school?

We cannot put too much emphasis upon school equipment. If a factory would be content with such bare equipment as that in the school described, it would not be very efficient. In fact its finer efficiency depends upon the things not mentioned in the previous paragraph. Without more equipment than is listed above, the class exercises will be largely of the textbook questions and answers. No teacher can do her best work without the necessary tools.

The library should be a part of every school's equipment. At first, it should consist of the most usable books, supplementary readers, books of historical and geographical references, a dictionary, and at least one book of general information, even if it cannot be more than the World Almanac. Later, books of more general reading can be added. A lot of money has been wasted by teachers who did not know what books to buy. Once in a while you find in the libraries such trash as "Ten Nights in a Bar-room." If teachers will follow suggestions in the Library Day Annual, prepared by the Department of Schools, they will save money and secure better books. It is of small worth to buy books unless they can be kept in a case. This case need not be expensive. In nearly every school may be found one or more boys who will gladly make a library case, or the neighborhood carpenter will make a case at small cost.

There should be several wall-maps, a globe and a primary reading chart.

Boards of education can easily be persuaded to supply these and help supply a library if the matter is brought to their attention in the right way.

The sand table is inexpensive and yet its possibilities are limited only by the limitations of the teacher. Anyone who can secure a few feet of lumber and can use the saw and hatchet can make a sand table. Already a number of rural teachers are using the sand table with fine results.

To set the small pupils to cutting paper may set a-wagging many tongues of the community who have been used to A B C methods of teaching, but if a teacher is skillful she will be able to secure a half dozen pairs of scissors and thus make it possible for the little ones to forget many of their troubles while cutting paper. Are you afraid to try it?

These are but a few of the suggestions that might be made. The finer things of the school can be done by means of equipment not usually furnished by boards of education. It will all depend upon the ingenuity and skill of the teacher. The catalog of A. Flanagan Company, Chicago; Milton Bradley Co., Philadelphia; Dobson, Evans Co., Columbus, O.; Virginia School Supply Co., Richmond, Va., and others will be suggestive to teachers, since they make a specialty of such equipment. Any good book on methods of teaching will aid the teacher. The time has come when merely assigning lessons and hearing recitations out of books will not do. Such methods have never done well.

THE DECORATION OF SCHOOL ROOMS.

Very many children, during their school lives, pass from 5,000 to 8,000 hours within the school room. What effect, then, the mere physical appearance of the school room interior may have upon the child is certainly worthy of consideration, though to that effect very little thought has usually been given. It is true that in many of our fine new city buildings the matter is being treated as carefully as are the other points that pertain to the well-being of the child, but in the great number of smaller buildings, in the country and in little towns the subject is practically ignored.

To the many earnest and faithful West Virginia teachers who, by their labors in securing school libraries, in beautifying school grounds, and similar endeavors, have shown their genuine interest and oftentimes a real missionary spirit and devotion, these words are written, in the hope that they may prove of some value for suggestion and guidance to such as may undertake some activities along this extremely important line of school improvement. For it is not likely that much of this work will be done by the board of education, upon whose already overburdened shoulders the responsibility really rests.

In most instances, probably, whatever is done will be another mark of the enthusiasm, industry and patience of some humble and devoted teacher.

The Walls.

An uncoated, plastered wall is not only an ugly and unattractive thing to look at, but it is also an actual source of injury to the eye. Practically nowhere in Nature, do we find such an environment facing us. Physicians are of the opinion that a strong glare on the eye for a long time is a source of serious eye strain, with accompanying nervousness and restlessness. In our homes we usually strive to cover the plastered wall with some appropriate color.

The walls made of wood ceiling, which are found in so many of our school houses, soon darken by the natural change of the wood, so that they are perhaps less harmful to the eye, but on the other hand are even more ugly and unsightly than the plastered wall. The plastered wall may be relieved somewhat by pictures or other decorations, but the wooden wall is likely to look the worse for these.

For the plastered wall tinted preparations of the nature of the one in common use, called Alabastine, are not expensive, are quite durable, and come in an excellent range and variety of shades. For the wood it is better to use some of the so-called "flat" interior paints, that is, paints with a dull rather than a gloss surface. These are more expensive than the washes, such as the Alabastine, but they have the advantage that when they become soiled they can be sponged off and cleansed.

In the choice of colors both artists and physicians are pretty well agreed as to what colors are most suitable. It is a physiological fact that the shades towards the red end of the color spectrum are more irritating to the eye than those near the center of the spectrum. Therefore we should avoid such colors as yellow, orange and red. The greens, of which there is a wonderful range of tints, are both artistic, and soothing to the eye. Through countless ages our eyes have been getting accustomed to the various shades of green in the vegetation that surrounds us out of doors. Some buffs and light browns and some light shades of blue may do for certain rooms. Suggestions for color schemes will be found in the cards and other advertising matter issued by paint manufacturers, but where the teacher, with whatever assistance can be secured, undertakes to put on a coat of paint or other coating a single tint properly selected will do very well.

Pictures.

A whole book would not more than suffice to treat adequately the subject of the pictures in the school room. A few of the chapters of Burrage & Bailey's School Sanitation and Decoration treat of the subject and any teacher having access to the book would do well to read it. Some general suggestions only can be given here.

The cheap, highly colored pictures of many kinds that are distributed free by commercial firms and companies for advertising purposes are not usually appropriate or suitable for school decoration, although we often see them used for the purpose. Indeed, sometimes school rooms are found that have their walls almost completely hidden by material of this kind. Oftentimes it is tacked or nailed up to the wall and the following year will be torn down, leaving the wall permanently disfigured by the nails that were used in putting it up. The decorations of a school room ought to be of sufficient appropriateness and value to make them worthy to remain on the wall, when once put there; if not permanently at least not to be subject to removal except to put something better in their places.

Subjects. While it is better, in general, to take our subjects from the lists of the paintings by artists whose merit is generally recognized and acknowledged, still, it must be remembered that not everything of this type is suitable for school decoration. On account of the nature of the subject, or for other reasons, there are many paintings by the old masters which are not nearly so well suited to a school room as would be some less known pictures by modern painters.

The pictures for a single grade of a city school can be selected with reference to the interests of children of about the same age, while an ungraded or one-room school will have the varying interests of children of all ages. However, there are still certain groups of subjects that are safe in any case.

The mother and the child, exemplifying mother-love; scenes of home life in the house, the yard, or the field; man's relations with the animal world, either of domestic or wild animal life; animal life without reference to man; the Christ-life, and other Biblical scenes; many views of land and water; any of these, properly selected are likely to present the elements of interest which will lead under proper guidance to the love for art. Such things abound in the paintings of the earlier and later masters. Millet, Murillo, Breton, Dupre, Reynolds and many other signatures will be found beneath pictures whose subject matter is exactly suited to the purposes of the school room.

Kinds of Reproductions. The common penny pictures have many uses in the school room, but they are not usually well suited for wall decoration. Besides their small size, they are usually of the sort of reproductions known as half-tones, which are not very good for the purpose. This is the kind of work we find in most magazine pictures, which, while satisfactory for that kind of illustrating, does not bring out the lights and shadows and tone values of pictures enough for the purposes of wall decoration. Many publishers get out reproductions of the general type of photogravures that are far better suited to the purpose. They come mostly in blacks and browns, and are true to the originals as well as being artistic and permanent. In sizes suitable for school use they can be had at prices ranging from a dollar to a considerably smaller amount, depending upon size.

Sizes. A picture of the size of 22x28 is large enough for almost any ordinary school room, while in subjects in which there is not too much detail such sizes as 20x24, 16x20 and even smaller, are often convenient and satisfactory. A large wall space naturally requires a larger picture than a smaller space, which enables us oftentimes to use various sizes of pictures for a pleasing effect in the same room. Sometimes quite a small subject, properly chosen, is just the thing for a narrow space between two windows and here long panel shaped pictures are oftentimes especially effective.

Framing. It is very rarely that we find an unframed picture in a refined home. It would certainly seem as out of place in a school room.

Probably the best thing that the teacher can do is to buy his pictures already framed, although there are some difficulties in the way of doing this. For instance, the ordinary dealers in the country and small towns do not have very carefully selected stocks, but buy in quantities, pictures that have been selected almost at random by the manufacturers who frame them, without much regard to the subject, the painter, the merit of the reproduction or anything else. They are especially likely to have cheap and highly colored, even gaudy reproductions of paintings by artists little known and perhaps of small ability. A person who knows for what he is looking may occasionally find in these collections some subjects that he wants, and that are worth having. Then the frames themselves are oftentimes very flashy and cheap, the gaudy effects covering all sorts of defects of workmanship and art.

Many small towns, and nearly all large ones, have men who frame pictures as a business and can do simple jobs of framing fairly well.

To these, however, the teacher ought to be able to give definite instructions as to width and style of moulding, width of margins, etc.

A teacher with some mechanical and artistic conceptions if provided with the proper tools and materials can oftentimes teach himself to frame pictures, which art will not only enable him to furnish his school house with much less expense, but will also be a means of making some little extra money, for in almost every community there are people who want pictures framed.

A Marsh mitre machine for cutting the moulding can be had for about $10.00. This can be used in other departments of wood-working and carpentry. As to materials he will need the following:

Moulding, in two or three widths. This can be bought either already finished in various colors, or "raw," that is, unfinished, the stain to be applied by the framer, at prices ranging from 2 cents to 8 cents a foot. Stains already prepared and easily applied can be had for this purpose. One advantage is that the framer does not have to carry so large a stock of mouldings, which he would need otherwise in various colors.

Glass. An amateur had better confine his frames to two or three standard sizes, as say 22x28, 12x20, 11x14, for which he can get glass already cut from any dealer. Irregular sizes will cost more. The framer can soon learn to cut glass of any size he wishes, however, with some practice, and for from ten to twenty-five cents he can get a very good cutter.

Backing. The manufacturers make special backing for filling in behind the pictures, for protection, etc. Ordinary cardboard will not do, for it will warp and the picture will follow it and twist out of shape.

Miscellaneous. Screw eyes, picture wire, tacks and nails are kept at the hardware stores. The openings and cracks between frame and backing at the back ought to be pasted to keep out the dust and grime which will slowly work its way down inside the front of the picture. Some mat-board should be kept for mounting an occasional picture which comes unmounted. This is, however, one of the most difficult things that the framer has to do, and he should, whenever possible, buy his pictures mounted on the mat-board in exactly the form he wishes to use them.

Suggestions. The frame should be cut about an eighth of an inch larger than the picture so that if the picture gets damp and swells it will have room for expansion. A beginner will do well to start with small frames, of narrow moulding, say 1 inch or 1 1-2 inches. Many

of the two and three inch mouldings are so thin that it is extremely hard to get a nail through them without splitting them. A Yankee spiral punch or drill, is useful for drilling before nailing thin mouldings. Many writers advocate close framing—that is, without a margin for the picture, but it is the opinion of the writer, after extended practice and observation, that a properly adjusted margin of white mat-board or occasionally some harmonious shade gives the best effect for many pictures, especially pictures in which there is much detail. The width of the margin, however, is very important. It does not look well if too wide, nor if too narrow. Ordinarily it should be of the same width around, although in some instances if slightly wider at the bottom the effect is good.

If the little penny pictures are used at all, they may be very cheaply framed with the passe-partout, in which form they are far more effective than when unframed. In some instances several of these may be mounted with proper grouping on one mat-board, and all framed together.

Casts.

Where the room has a shelf or other projection suitable for their reception plaster casts make a very interesting decoration. The manufacturers also sell pedestals and wall brackets suitable for the reception of these, although this will add considerably to the expense.

The casts should be procured in the ivory finish. Reproductions of almost all the famous sculptures of the world can be had in this form, at prices that are reasonably low. Some small pieces that would do very well for the purpose would not cost over a dollar. The price, however, increases rapidly with the size.

Bambini, by Della Robbia, The Madonnas by various sculptors, and many other pieces can be had in friezes, or bas-relief casts, ready to hang in some suitable space on the wall just as a picture is hung.

Flowers.

At many seasons of the year the teacher can have either growing flowers or cut flowers on her table or elsewhere in the room, and certainly nothing will add more to its beauty. Unfortunately the variability of the temperature of the ordinary school room prevents the keeping of potted flowers there at all times. Still, the schools that begin early can have flowers in the room the greater part of the term, if the teacher so desires it and will take the trouble.

In some of the dusty, dirty, unkempt and disordered school rooms

that we so often find in West Virginia, is it any wonder that so much of our attempted instruction goes for naught? A teacher who will find the way to reconstruct such an interior and to remake it into a clean, harmoniously colored room with its walls adorned with suitable reproductions of the world's best art is certainly bringing an environment around the school that will silently but powerfully reenforce her teaching, and may give some lessons which, no matter how good a teacher she may be, are without her power.

Dealers who are believed to be satisfactory are as follows:

Moulding and Framing Supplies, etc.:

D. E. Abbott & Co., Huntington, W. Va.
The H. Lieber Co., Indianapolis, Ind.
S. S. Moore & Co., Charleston, W. Va.

Pictures:

Perry Picture Co., Malden, Mass.
Geo. P. Brown & Co., Beverly, Mass.
Bureau of University Travel, Boston, Mass.
The A. W. Elson Co., Boston, Mass.
Horace K. Turner Co., Boston, Mass.
The Taber-Prang Co., Springfield, Mass.

The first three picture dealers listed make a specialty of "penny pictures," etc. The next two make a specialty of traveling exhibits, but also sell pictures. The last has a fine line of all sorts of good pictures at reasonable prices. W. A. Wilde Co., Boston, Mass., have a nice line of small colored biblical pictures.

Casts:

P. P. Caproni & Bro., Boston, Mass.
The C. Hennecke Co., Milwaukee, Wis.

Out of the many approved subjects in pictures a few are as follows:

Madonna of the Chair ..... Raphael
Rest in Flight ..... Knaus
Children of the Shell ..... Murillo
Baby Stuart ..... Van Dyck
Age of Innocence ..... Reynolds
Feeding Her Birds ..... Millet
By the Riverside ..... Le Rolle
Shepherdess Knitting ..... Millet
The Knitting Lesson ..... Millet

Caritas	Thayer
Member of the Humane Society	Landseer
The Connoisseurs	Landseer
The Blacksmith	Frere
The Escaped Cow	Dupre
The Sistine Madonna	Raphael
Madonna and Child	Dagnan-Bouveret
Children of Charles I	Reynolds
The Shepherdess	LeRolle
The Gleaners	Millet
At the Watering Trough	Dagnan-Bouveret
Automedon and the Horses of Achilles	Regnault
The Horse Fair	Bonheur
The Aurora	Guido Reni
Kabyl	Shreyer
Pilgrims Going to Church	Boughton
Paysage	Corot
Joan of Arc	Bastien Le Page
Queen Louise	Richter
Sir Galahad	Watts
The Hay Maker	Adan
The Sower	Millet
Dance of the Nymphs	Corot
The Golden Stair	Burne-Jones
Washington	Stuart
A Reading from Homer	Alma-Tadema
Princes in the Tower	Millais
The Last Supper	da Vinci
Can't You Talk	Holmes
A Helping Hand	Renouf
Monarch of the Glen	Landseer
A Halt in the Oasis	Shreyer
Angels' Heads	Reynolds
Christ in the Temple	Hofmann
The Broken Pitcher	Greuze
The Infant St. John	Murillo
Arrival of the Shepherds	LeRolle
Leaving the Hills	Farquharson
Return to the Farm	Troyon
Close of Day	Adan
The Infant Samuel	Reynolds

Song of the Lark ..... Breton
Amiens Cathedral .....
St. Mark's Cathedral .....
Notre Dame Cathedral .....
Milan Cathedral .....
Cologne Cathedral .....
The Colosseum .....
The Doge's Palace .....
The Rialto .....

SANITATION.

Two mottoes that are often seen exemplify the change that has come over man's whole attitude towards his life, so far as relates to the question as to whether his condition in that life is to be of health and strength or of weakness and disease.

Not long since the favorite motto that adorned our walls was the familiar "God Bless Our Home," executed in every variety of lettering and color. The motto was, we might say, about half right. We needed, and we still need, all the care that can be bestowed for our protection by an all-seeing and loving Divine Being, but we were too apt to put all of the responsibility and care on the all-carrying shoulders of Providence. If while we sat in ease and comfort, disease struck us, with its torturous course leaving us in weakness or in death, it was Providence that was at fault, and we put forth many a solemn wail at the mysterious and devious ways of the Providence of God.

Still, a little labor would have covered the cess-pool that bred the typhoid carrying fly, or drained the pond in which the malaria bringing mosquito as a "wiggle-tail" spent his active youth, or have cleaned out the lurking germs of the dread white plague, left by some earlier victims of tuberculosis.

It might be stretching it a little to dignify it with the name of a motto, but the legend that we see so oftentimes nowadays, in so many places, might be worthy of the name. At any rate we surely can do no better than put into action its command, and whenever we have the opportunity "Swat the Fly." Without any doubt when we are doing this we are doing something that really is far more likely to defend our physical well-being than we are in plastering our walls with mottoes of the old type.

For modern science is taking the position that disease has causes that are removable and preventable, and is, therefore, unnecessary.

We are learning what agencies carry and spread each kind of illness, whether it is the fly that is the noxious agent or the mosquito, or the flea, or the wind, or the water. We believe that by the destruction of the germs at their source, all diseases that pass from one person to another can be controlled. Other diseases that are brought to the individual not directly from some other individual but from the widespread contamination of waters and soils, will be prevented by stopping the infection of these things and by a more widespread diffusion of the knowledge of treatment of wounds, and of the laws of health in general. Diseases that originate within the individual from the misuse of the various organs in wrong habits of life, as for instance dyspepsia from wrong habits of eating or wrong kinds of food, shall be made to yield to right habits of life, about which we are coming to know more, and sickness will be practically at an end.

These things are not an idle dream; they are practical scientific possibilities. The adopted textbooks in hygiene, sanitation and physiology give a fine lot of information that should be used to this end; but physiological knowledge is one of the most useless kinds of knowledge, merely as knowledge, just as it is one of the most valuable kinds of knowledge when applied. The teacher should have a burning enthusiasm for knowledge of this sort, should seek it and acquire it from all possible sources, and in all cases should be in her school and in her community a tireless missionary of the great gospel of good health.

The teacher should above all things else try to control the health conditions of her school room. The room should be clean and every known sanitary principle within her power should be applied. For instance, the best air there is is that out of doors, and the one general principle of ventilation is to bring this air in as freely as is possible. Every dust mote may be the aeroplane of a jolly party of germs, ambitious to make explorations and settlements in some child's nose or mouth or lungs. Therefore the dust mote should reach the ground outside otherwise than by flight through the air. Blackboards should be cleaned outside of school hours in order to reduce the danger from chalk dust. A dozen kinds of germs are lurking in the common drinking cup, and the weakest, the strongest, or the dearest child of the school may be the next object of attack by a colony of the most deadly germs. For each child to have his own cup is little trouble.

These are but a few of the things the teacher should make his

daily thought. Nor should the teacher's efforts be confined to the school. Unhygienic habits of life in the child's family at home will often yield to the tactful talk of the teacher to the child. A teacher who might finally have this epitaph: "Each community in which she taught she left a stronger and healthier one," would certainly deservedly rank as a great teacher.

It is not the purpose of this article to furnish the rules and principles for such a work. Elsewhere must these be sought; in the physiologies; from medical works; from the physicians; and from many other sources. It is hoped, merely, that many teachers from reading this article may have a stronger sense of duty and a keener desire for this particular kind of service.

GRADING AND PROMOTIONS IN RURAL SCHOOLS.

One of the chief difficulties in carrying out instructions in this course of study will be the grading of the pupils. And yet it is a rather simple matter as a general proposition. Its difficulty is found in applying the general principle to particular pupils.

Suppose you have a school that has never been graded, or at least has been only very poorly graded. The first thing to do is to determine what pupils should be in the first grade. Of course all who are just starting to school for the first time will be in that grade. Normally we would expect them to be six years of age. But some of them may be seven or eight years of age.

Furthermore, there will likely be some who have been in school one or two years, but, because of irregular attendance, poor teaching or dullness on their part, have not learned enough of the first grade work to do the work of the second grade. These will also be in the first grade. Once it is determined what pupils will do the work of the first year, you have your first grade organized. Then you go to the course of study and find just what work these pupils will do. Similarly the teacher will organize the pupils into classes of the second grade, third grade, and so on up through the eight grades, if all the grades are represented. And by referring to the course of study the teacher can tell just what work each grade will do and what books they will study.

It is to be hoped that no teacher in the state will hereafter disregard the course of study and go on in the old way of trying to teach each pupil in a class by himself. Even during the past year teachers have been found with as many as a dozen classes in arithmetic, each pupil working by himself and going as far each day as he

could work the examples or solve the problems. Such individual teaching might not be very bad if properly done, but no teacher has time to do this. Some of the pupils will be neglected and the neglect usually comes to the smaller ones who really need most attention.

Once the school is graded the matter of promoting next claims attention. Normally the first grade would be promoted to the second grade at the end of the year, the second to the third and so on up to the eighth grade, who would receive their diplomas. But it does not always work out so in actual practice. Some pupils will do better than others. The test for promotion should always be ability of the pupil to do the work of the next higher grade. If at any time a pupil can do the work of the next higher grade, he should be promoted. This situation will not often arise unless there be pupils whose age would normally place them in a higher grade. In such cases the pupils should be given a trial in the grade of their age, or the grade next above the one in which they have been placed. It may be that a teacher will misjudge a pupil's ability to do the work of a given grade and place him in a grade too high. This misjudgment is all the more likely where poor records of the pupil's work have been kept, the teacher being compelled to rely on the pupil's statement or a brief oral examination. In such case the pupil should, after a fair trial, be placed in the next lower grade.

The classification of pupils by grades is a means of economizing the time and energy of the teacher. The chief reason why grading is important in a rural school is that a teacher can in fifteen minutes teach a half dozen pupils more and better in a class than if she gives each of them 2½ minutes separately. And since the rural teacher has from six to eight grades, it is the only way she can distribute her time so as to get the best results in the short time at her disposal. Furthermore there is something to be gained by the association of pupils in a class. They learn from one another and have a means of measuring their attainments with those of their fellows.

EXAMINATIONS AND THE FREE SCHOOL DIPLOMA.

There should be no written examinations for promotion below the fourth or fifth grade. There may be written exercises of the nature of examinations. Even then and thereafter promotion should not be determined wholly by the results of the examinations. The teacher should keep in mind always that the true test for promotion is ability to do the work of the next higher grade. The examination,

therefore, should be only one means of determining this ability. The examination should be a fair test of the pupil's knowledge of the work he has been doing, and at the same time should be a test of the pupil's ability to generalize from this knowledge and apply it to new situations.

The final examination for the free school diploma will be prepared by the State Superintendent. This examination will aim to test the pupil's knowledge of the elementary subjects. It will determine first, whether or not the pupil has received all from the elementary grades that it is worth while to get, and second, whether or not he is prepared to do the work of the first year in high school.

The free school diploma is serving as a fine incentive for pupils to complete the elementary grades, especially where a high school is within reach of the pupils. Teachers will be rendering a great service not only to their pupils but also to the state by acquainting the boys and girls with the value of finishing the course and receiving the diploma. To develop the habit of finishing a task once begun is an essential step toward success in life. Winning promotions year by year and finally this diploma will be a valuable contribution toward fixing such a habit.

LITERARY EXERCISES.

Every school ought to make some provision for so-called "literary work" or "literary exercises." It is perhaps best for certain reasons to have this done in the school under the supervision of the teacher, but if there is sufficient interest among the patrons to maintain a good literary society, meeting in the school house at night, it is well to organize it. The literary exercises of the school cannot assume that breadth of scope which the literary society for the whole community does, because of the immaturity of its members.

The school should, in a measure at least, become a social center for the district. The regular meetings of a literary society furnish the opportunity and occasion for the patrons of the school to meet and discuss the subjects that are of interest to them. It affords the teacher also an opportunity to meet the patrons, to become acquainted with them, to explain the work of the school, to interest them in its work, and to enlist their co-operation.

There will always be in every community those whose ability and information fit them to discuss the larger questions of the day. They bring to these discussions the results of their own experience and knowledge of affairs, and the younger members of the society profit

greatly by hearing them. In this way the literary society renders both an intellectual and a social service.

The work of the school is quite largely a work of acquiring, of taking in, of impression. In earlier years the mind's ability to take in exceeds its power to give out. And yet the power to express is the practical power to the adult. It is the man who has been trained to express himself who becomes the leader of others. It was said of David Page, the first principal of the Albany (N. Y.) Normal School, that one of his chief traits was his ability to think and to express his thought, "while standing on his feet before folks." This power like every other may be stronger in some than in others, but in every case it is developed by experience and trial.

It should be borne in mind also that work of this kind is easier for children in their earlier years than it is later. It is very difficult for one who has reached maturity without having had any training in public speaking to make the first attempt. As pupils enter the period of adolescence they become more self-conscious and it is more difficult for them to respond to such requirements.

The work, so far as it is under the direction of the teacher should be carefully supervised. Pupils left to themselves are apt to select readings, recitations, etc., with reference to some vein of humor which is apt to be coarse. The literary work should aid in the appreciation of good literature. To this end the teacher should help the pupil to select his material from writers of known ability and reputation. The fact that material of this kind can be used in the literary work furnishes a stronger motive for the careful memorizing of select poems and other selections from literature.

The exercises of most value to the pupil, however, are those which call upon him to work up in his own way the material which he may have accumulated on any subject. This is original work. Theme writing is to literature and reading what the laboratory is to scientific study. It is the means of working up into usable form the materials which one collects. Hence the essay, oration, or written debate is valuable in developing the original power of the pupil and teaches him to arrange his ideas and express them in the most forcible way.

In many schools literary societies are organized, which elect their own officers, construct their own programs and conduct their entire exercises. These societies are always, of course, subject to the supervision of the teacher. They have this advantage, that they give pupils a practical training in the conduct of public bodies, and

make them, to some extent, familiar with some of the principles of parliamentary law.

Teachers are strongly advised to write the Department of Schools, Charleston, requesting a copy of a Handbook, containing Suggestions and Programs for Community Social Gatherings at Rural School Houses.

READING CIRCLE WORK.

The idea of the Teacher's Reading Circle arose some twenty-five or thirty years ago, and it has been one of the prominent factors in arousing interest in, and developing the study of, the professional side of the teacher's work. It is a matter for congratulation that with so little organization to push the work in this state, so large a number of the teachers read and study the books recommended each year. Every teacher in the state ought to be an enrolled member of the Circle. A few reasons follow why this should be done.

The value of the Reading Circle work to the teacher lies *first* in this, that it selects his professional books for him. The texts recommended for study from year to year are selected with especial care both as to their treatment of the subject and as to their adaptation to the needs of the teachers of the state. They can be depended upon as being sound in their teaching, and they are selected with reference to the particular needs of our own state. Many books are examined before a selection is made. With the great multiplicity of books on educational subjects now coming from the press, the matter of proper selection of one's professional reading is of great importance to the teacher.

Second. Every teacher, whether he has had a normal course or not, must read some educational books in order to grow professionally. No teacher can long continue to do successful work who is not keeping up with the progress in his profession.

This progress has been so rapid in recent years that it requires the teacher to be on the alert all the time. Ten years has seen almost a complete change in the view of the purpose of the school and of the methods of attaining that purpose. These changes are reflected in the more recent books and literature and, therefore, they are the sources to which teachers must go for their own knowledge of the progress and current tendencies in education. Constant reading of the literature of the profession is necessary to one's professional growth.

Third. The aim in the Reading Circle work is to select books from

year to year so as to present different phases of education or different fields of study. The history of education, psychology, method and the general principles of teaching, all, by this means, receive their proper consideration and the teacher's professional reading maintains a balance and proportion which it otherwise might not have.

Fourth. By the purchase from year to year of the books recommended for reading, one soon accumulates a library of well-selected professional books with which he is thoroughly familiar. Frequent reading and study of these works help, at least, to furnish clearer ideas of the purposes of the public school and of the processes of educating the child. The more clearly these purposes and processes are seen the more direct become the efforts of the teacher and the better are the results of his teaching. In other words, careful study of the books prescribed in the Reading Circle will tend to more efficient work by the teacher.

PLAY.

Certainly every teacher in our remotest country school has heard of the importance of teaching children, and even adults, by beginning with what they already know. This is a widely recognized principle and should be applied in every phase of school room work. Play is one of the instincts found in the early development of child life. It is only the abnormal, or very exceptional child who enters school with little or no knowledge of spontaneous play, and of a few simple games. Hence, this elementary knowledge of games will serve as a good starting point for teaching. Each teacher should, early in the term, ascertain what games the pupils know, what ones they like, and how skillfully they can play them. These facts will throw much light upon the mental habits of the pupils and upon their skill in motor control, two facts which the teacher must know before he can do effective teaching. If the young pupil has a particular desire to play ball it is quite probable that you can teach him this word much more easily than a word which does not appeal to his interests. If the pupil lacks motor control you may be able to discover some physical defect, which, if not attended to, will seriously impair mental development; that is, the teacher may be able to discover a defect in seeing, or hearing. There are other reasons, however, why the teacher should give attention to play. The main ones are recreation and sport.

Games have a positive educational influence in the development of the individual. The child who is dull, slow, and timid, and seems to hesitate before acting upon external stimuli often undergoes a com-

plete change under the influence of carefully planned or spontaneous games. His sense of perception is cultivated by learning to see the ball when it is coming towards him, to make the proper muscular reaction with the bat, to hear the footsteps behind him, to recognize and respond quickly to all the stimuli around him. If he is excelled by pupils of his own age and seeming strength his motive will be strong for improvement. The awkward pupil has strong reasons for developing activity and grace.

Many children who are timid and backward owing to certain home environment naturally shrink from society. They lack self-confidence and hesitate to trust others. On the other hand, there are those who are bold, over-confident, and self-assertive. Nothing is a better leveller for these two cases than games which require co-operation. The timid child gains self-respect and confidence, and the boisterous one learns that he cannot secure results without the co-operation of his playfellows.

Many children come from families in which they move according to that which pleases them. They have always acted upon impulse and have never learned to suppress a desire for the sake of the end to be attained. Well chosen and skillfully directed games will do much towards developing the children's ideas so that they will act for the good of society rather than for selfish purposes.

Games for young children should have few restrictions and should aim to develop spontaneity and initiative. However, the very young child will soon learn that he must conform to certain regulations; these regulations become more formal and exact as the child matures and indulges in other games. He soon learns that he cannot bat out of his turn, that the rights of other pupils must be respected, and that at times he must even make a sacrifice hit in order that another may score. Ample opportunity is afforded for the pupil to distinguish between winning by fair means and foul. If a love of fair play is instilled into the pupil at an early age it will be of inestimable value both to the pupil himself and to society.

We would suggest to teachers that games be selected which have strong play values, i. e., the game selected should contain the elements of both sport and interest. Let the teacher participate in all games. Do not make games too serious; get fun and laughter out of them. In teaching games much interest may be added if a full explanation is given by the teacher before the game is begun. This may often be best done by means of diagrams upon the blackboard. Whenever

the interest in a game wanes the teacher should be ready to suggest a new one. Games furnish excellent opportunity for teaching discipline; let the teacher see to it that good discipline prevails upon the play ground. Teach pupils to play to win, but emphasize the importance of proper tactics, and aim to cultivate a high sense of honor.

For further study of games it is recommended that the teacher procure a copy of "Games for the Playground, Home, School and Gymnasium," by Jessie H. Bancroft. The book is published by the Macmillan Company, New York. Price $1.50. It names and describes a large number of games suitable for each grade in the elementary school. Another book of games costing less is recommended: Johnston's "What to Do at Recess"; Ginn & Co., New York, price 25 cents. The following list of games may prove helpful to teachers.

First and Second Years.

Playground.	*Indoors.*
Jack Be Nimble.	Changing Seats.
The Muffin Man.	Bean Bag and Basket Relay.
Teacher and Class.	Kaleidoscope.
Do This, Do That.	Oats, Peas, Beans.

Third and Fourth Years.

Playground.	*Indoors.*
Bean Bag Circle Toss.	Blackboard Relay.
Single Relay Race.	Leaf by Leaf.
Prisoner's Base.	Slap Jack.
The Farmer is Coming.	Target Toss.
Hill Dill.	Last Man.

Fifth to Eighth Grades Inclusive.

Playground.	*Indoors.*
Circle Dodge Ball.	Blackboard Relay Race.
Wood Tag.	Nimble Squirrel.
Double Dodge Ball.	Bend and Stretch Relay.
Jumping Rope—III.	Hen Roost.
Partner Tag.	The Minister's Cat.
Old Woman From the Wood.	Author's Initials.
War.	Prince of Paris.
Base Ball.	

MORALS AND MANNERS.

Character has a physical basis and this fact should be recognized early in life by the child. The teaching of morals and manners

should be so directed that the child may realize that its physical welfare will be benefited, and that it pays to do right for economic and social reasons. It should be made clear to children that their usefulness, influence, and happiness in life will depend very largely on the character they will build.

There are two distinct periods in character building that the teacher must recognize if the most desirable results are to be obtained. The period of childhood from six to about twelve or thirteen and the period of youth from twelve or thirteen to about twenty years or later must be clearly distinguished. In childhood the instincts are individualistic. The appeal must be made only in so far as the child can see a personal benefit to be derived. All other teaching must be based on recognized and accepted authority. The important thing in childhood is to have the child act out every moral idea and precept that is to be learned. A properly organized school furnishes very excellent situations for the child to do what is to be learned. With the child even more than with the youth the doing is the learning.

As soon as the child attains to the age of youth a very different manner of treatment must be accorded him. His social instincts now make it possible for him to become morally whatever his environment will produce in him. He now has a natural disposition to do and to live for other people. The teacher should not only recognize this new sense, but he must also recognize that the youth has a keen sense of the respect, reverence, and confidence that he is worthy of. He should be treated now as one whose opinions and behavior are of real worth to other people.

Some of the things that the child should learn are cleanliness, neatness, promptness, regularity and obedience. It is also well that the child should learn that it should pay for a benefit before it enjoys it and that it should take pain before pleasure when the one follows the other. Teach by incidents, illustrations, and stories well told to impress the idea and to secure the proper response in conduct. Show that kindness, honesty and truthfulness have their sure reward. Teach that industry, politeness, and respect for other people are desirable virtues and that idleness, rudeness and irreverence are vices to be avoided.

Teach the youth to see clearly the need and value of institutions, of government and of society. Use biography, history, and literature to show how civilization depends upon the co-operation of human beings of all classes and ranks of life. Give the youth large oppor-

tunity to act out his moral ideas and place responsibility upon him for which he is to account in a reasonable length of time. Keep in mind in dealing with both children and youth that prevention and not reformation is the school's function. The time to act on the part of the teacher is before the impulse and instinct have resulted in undesirable behavior.

PLAN BOOK.

There is no learning without thinking on the part of the pupil. Memorizing is not learning. There is no teaching without thinking and reasoning on the part of the teacher. Hearing pupils recite the lessons they have learned or committed and drilling pupils on what they have not yet acquired is not teaching.

There is no teaching without thinking on the part of both pupil and teacher. Thinking, in this connection, may be described as making plans to meet felt needs and finding means to secure the end planned for. Thinking consists in planning worthy purposes and aims and in finding the most economic means to the attainment of these purposes and aims. It follows that successful learning and teaching alike must be well planned.

Every teacher should have a plan book of convenient size. A blank book about 8x10 inches is suitable in size. The teacher should begin to collect material in this book not later than at the county institute in any school year. During this institute week, many suggestions should be developed into tentative school plans which should later mature into very definite plans for teaching. When the school opens, the book should contain the large plans for the entire year and detailed plans for the first week or two.

After the school has opened in the fall, the plan work should be done weekly and daily. At the end of each week, the plans for the next week should be written in the book. These plans should indicate briefly how much will be attempted in each subject, book subjects by topics and outlines, etc.; objective subjects as nature study, home geography, agriculture, etc., by very definite accounts of the material to be used in each lesson, together with the aim or purpose in presenting the material. In doing this weekly plan work, the text book material should be carefully sifted to find what the pupil will need to learn, what difficulties the pupil will find in learning the material, and what may be omitted. This is the time to rank the material according to its educative value. As the book grows from week to

week, the teacher can look back through it to get the trend of his school and to direct the school more wisely and economically.

There can be no successful teaching without daily preparation and planning of the work. A teacher never becomes so thorough in any subject that daily preparation is not necessary to teach it successfully. To provide for good teaching and the growth of the teacher, individual lessons should be planned as often as time will permit. A plan of this kind consists in stating the aim or purpose of the lesson or group of closely related lessons, an analysis of the material to be studied in the lesson and the chief teaching questions to be asked the pupils.

Suggestive school room material, such as seat work, plan books, etc., may be found by writing C. W. Bardeen, Syracuse, N. Y.; A. Flanagan Company, Chicago, Ill.; or Milton Bradley Company, 11 S. 16th St., New York. A chapter on lesson planning together with a number of lesson plans may be found in Strayer's "The Teaching Process," published by the Macmillan Company, New York City, $1.25.

THE DAILY PROGRAM.

The arranging of a daily program is always a difficult thing to do in a rural school of eight grades. And yet the success of the school depends largely on how well this program of daily work is arranged. The tendency among teachers is to provide for too many classes. Some teachers have been found trying to do the impossible task of teaching from 30 to 40 classes a day. There should not be more than 20 to 25.

How to avoid having too many classes is a problem that confronts every rural teacher of a one-room school of seven or eight grades. The problem can be solved only by alternation and correlation of studies.

Alternation is the systematic and regular union of two grades of pupils, both grades doing the work of one year in one class, while the other year's work is omitted. The next year the work omitted is taken up and the first year's work dropped. In this way each pupil does all the work of the course, but not all in the same order, and the number of classes is greatly diminished, the recitation periods lengthened and more efficient work done.

The best rural school work can not be done without alternation. Alternation is used in many high schools and also in colleges and

post-graduate courses of our great universities. The rural teacher must avail himself of this valuable plan of organization.

Alternation of classes may begin in the 3rd and 4th grades, but for most schools it is adequate to begin with the 5th and 6th grades. It is a very simple matter to teach the 5th grade work in geography to the 5th and 6th grade pupils in 1914-15 and in 1915-16 to teach the 6th grade geography to 5th and 6th grade pupils, and so on, alternating each succeeding year.

In a similar manner 5th grade reading and 6th grade history, 5th and 6th grade arithmetic and 5th and 6th grade language work may be alternated. In the 7th and 8th grades all the work may be alternated where it is not more economical to correlate with other subjects.

Correlation is here used to mean the teaching of one subject, as bookkeeping, while teaching the 8th grade arithmetic work. Above the 5th grade there should be no class in writing except in individual cases. These individual cases should take daily practice along with the lower grades.

Type Daily Program of Recitation and Study.

Suggestions.

1. Note that this program is but a *type* program. It is meant merely to be suggestive. The number of pupils and the number of grades will determine the daily program of *your* school.

2. Study this type daily program diligently until you have mastered the general plan of recitation and study periods. To do so will enable you to work out a daily program for your school.

3. Note that it is important for children to have regular times for studying the different subjects as well as for reciting. To do so will result in good habits of work and better discipline in the school.

4. This type program has 26 recitation periods. You will doubtless be able to reduce this number somewhat. For example, three periods, 25 minutes, are allotted to spelling. If your pupils are already reasonably good spellers, or if you think you can teach spelling in connection with other subjects, these periods may be eliminated, thus reducing the number of class exercises to 23 and allowing 25 minutes to be applied to other subjects.

5. Note what classes are alternated and correlated in this type program. It may be that you can extend these methods of saving time. The teacher must be the judge as to whether two grades can work together on one year's work without having done the work of

the preceding year. In classes so indicated it is possible, provided the pupils have been well taught up to this time. Once a school has been organized in this way it is then comparatively easy to do.

6. Note that but one period has been assigned to United States and state history. It may be that the teacher will have to teach seventh grade history as a separate class. In the grades below the 7th geography and nature study use the same period, on different days. Hygiene and sanitation should be taught at this same period once a week. A good allotment would be: Nature study, 2 days; geography, 2 days; hygiene and sanitation, 1 day. In the 7th and 8th grades agriculture and physiology should use the same period, reciting on different days, 2 periods for the one and 3 periods for the other each week.

7. Note that reading includes literature and language includes composition. See Section III for definite instructions for teaching these subjects.

8. General history has not been given a place on this program. It should not be taught unless absolutely necessary. Bookkeeping should be taught only in connection with 7th and 8th grade arithmetic.

Ex. and Recit. begin	Time in minutes.	RECITATION PROGRAM	STUDY PROGRAM			
			Section D—1st & 2d Grades	Section C—3d and 4th Grades	Section B—5th and 6th Grades	Section A—7th and 8th Grades
A. M.						
8:50	10	Opening Exercises.....				
9:00	15	A. U. S. History—Seventh and 1st half of Eighth. A State History—2nd half 8th Grade.....	Reading — 1st and 2nd.....	Reading.....	Reading, 5th.....	
9:15	10	D Reading—1st Grade....	Reading—2nd	Reading 3rd and 4th.....	Reading, 5th and 6th.....	Language, 7th and 8th...
9:25	10	D Reading—2nd Grade...	Board Work—1st..	Reading, 3rd and 4th.....	Reading, 5th and 6th.....	Language, 7th and 8th...
9:35	10	C Reading—3rd Grade...	Board Work — 1st and 2nd.....	Reading, 4th.....	Reading, 5th, Language 6th	Language, 7th and 8th...
9:45	12	C Reading—4th Grade...	Board Work—3rd..	Language, 3rd	Reading, 5th, Language 6th	Language, 7th and 8th...
9:57	13	B Reading—5th Grade....	Seat Work—1st and 2nd.....	Language, 3rd and 4th....	Language, 6th.....	Agriculture and Physiology .....
10:10	15	B Reading—6th Grade...	Seat Work—1st and 2nd	Language, 3rd and 4th....	Language, 6th.....	Agriculture and Physiology .....
10:25	10	C & D Nature Study—Geography—1st, 2nd and and 3rd Grades.....		Language, 4th.....	Language, 5th and 6th...	Agriculture and Physiology .....
10:35	10	RECESS				
10:45	15	A Language—7 &8 Grades	Story and Language	Language, 3rd and 4th....	Spelling, 5th and 6th.....	
11:00	15	B Language—5 & 6 Grades	Reading and Drawing	Language, 3rd and 4th....		Agriculture and Physiology .....
11:15	10	C Language—3 & 4 Grades	Language-Story Literature		Spelling, 5th and 6th.....	Agriculture and Physiology .....
11:25	10	D Language, Story Literature—1 & 2 Grades....		Geography, Nature Study, 4th	Geography, Nature Study, 5th and 6th.....	Arithmetic, Bookkeeping..
11:35	20	A Agriculture and Physiology—7 & 8 Grades...	Reading and Drawing	Geography, Nature Study, 4th	Geography, Nature Study, 5th and 6th.....	
11:55	5	B Spelling—5 & 6 Grades	Reading and Drawing	Geography, Nature Study. 4th		Arithmetic, Bookkeeping..

TYPE DAILY PROGRAM OF RECITATION AND STUDY—Continued.

Ex. and Recit. begin	Time in minutes	RECITATION PROGRAM	STUDY PROGRAM			
			Section D--1st & 2d Grades	Section C—3d and 4th Grades	Section B—5th and 6th Grades	Section A—7th and 8th Grades
12:00	60	NOON				
P. M. 1:00	10	D Reading—1st Grade...	Reading, 2nd.....	Geography, Nature Study, 4th	Geography, Nature Study, 5th and 6th.....	Arithmetic, Bookkeeping..
1:10	10	D Reading—2nd Grade...	Board Work—1st..	Arithmetic, 3rd and 4th..	Arithmetic, 5th and 6th..	Arithmetic, Bookkeeping..
1:20	15	C & B Geography, Nature Study—4 & 5 Grades...	Seat Work—1st and 2nd	Arithmetic, 3rd.....	Arithmetic, 6th.....	Arithmetic, Bookkeeping..
1:35	15	B Geography, Nature Study—6th Grade.....	Seat Work—1st and 2nd	Arithmetic, 3rd and 4th..	Arithmetic, 5th.....	Civil Government.....
1:50	20	A Arithmetic, Bookkeeping —7 & 8 Grades.....	Seat Work—1st and 2nd	Spelling, 3rd and 4th.....	Arithmetic, 5th and 6th..	
2:10	15	Writing—1st to 8th Grades				
2:25	10	RECESS				
2:35	15	C Arithmetic—3rd Grade.	Language-Story Literature	Spelling, 4th.....	Arithmetic, 5th and 6th..	Civil Government.....
2:50	15	C Arithmetic—4th Grade.	Language-Story Literature	Spelling, 3rd.....	Arithmetic, 5th and 6th..	Spelling, 7th and 8th....
3:05	15	B Arithmetic—5 & 6 Grades	Language-Story Literature	Spelling, 3rd and 4th.....	.....	Civil Government.....
3:20	15	A Civil Government—8th Grade	Literature and Drawing	Literature and Drawing...	Literature and Drawing...	.....
3:35	10	C Spelling—3 & 4 Grades	Literature and Drawing	.....	Literature and Drawing...	Spelling, 7th and 8th....
3:45	10	A Spelling— 7 & 8 Grades	Literature and Drawing	Literature and Drawing...	Literature and Drawing...	.....
3:55 4:00	5	Closing Exercises..... Dismissal				

SECTION II

Outline of Studies by Grades.

OUTLINE OF STUDIES BY GRADES.

First Grade.

READING—*Texts:*

White's Story Reader (Primer).

Jones' Reader—Book One.

Supplementary Readers:

Art Literature Readers.
(Primer and First Reader.)

Free and Treadwell's Literature.
(Primer and First Reader.)

See Reading and Literature, and Language and Composition, Section III, for General Discussion and First Grade.

WRITING—*Text.* Berry's Writing Books. Book No. 1. See Writing, Section III, General Discussion and First Grade. Write B. D. Berry & Company, 620 So. Wabash Ave., Chicago Ill., for "Suggestions for Teaching Writing."

SPELLING—See Spelling, Section III for General Discussion and First Grade.

ARITHMETIC—See Arithmetic, Section III, for General Discussion and First Grade.

NATURE STUDY—See Nature Study, Section III, for General Discussion and First Grade.

PHYSIOLOGY AND HYGIENE—See Physiology, Section III, for outline of work in First, Second and Third Grades.

DRAWING—See Drawing, Section III, for General Discussion and First Grade. Use Prang's Progressive Drawing Books—Book One.

MUSIC—See Music, Section III, for General Discussion.

Second Grade.

READING—(See directions for First Grade work.)

Text: Jones' Reader, Book Two.

Supplementary Readers:

Art Literature Readers (Second Reader).

Free and Treadwell's Second Reader.

WRITING—Same as First Grade.

Text: Berry's Writing Book No. 2. See Berry's "Suggestions for Teaching Writing." See Writing, Section III, for General Discussion, and Second Grade.

SPELLING—Same as First Grade. See Spelling, Section III, for General Discussion and Second Grade.

ARITHMETIC—See Arithmetic, Section III, for General Discussion and Second Grade.

NATURE STUDY—Same as First Grade.

HISTORY—(Story and Biography). See United States History, Section III, for General Discussion and Second Grade.

PHYSIOLOGY AND HYGIENE—See Physiology, Section III, for General Discussion and Outline of Work for First, Second and Third Grades.

DRAWING—See Drawing, Section III, for General Discussion and Second Grade. Use Prang's Book Two.

MUSIC—Same as First Grade. Congdon's Music Primer, Book I.

Third Grade.

READING—*Text:* Jones' Reader—Book Three.

Supplementary Readers:

Art Literature Readers (Third Reader).

Winslow's "The Earth and Its People," of the Geographic Readers, or some other book of similar grade.

See Reading and Literature, and Language and Composition, Section III, for General Discussion and Third Grade.

WRITING—*Text:* Berry's Writing Book No. 3. See Writing, Section III, for General Discussion and Third Grade.

SPELLING—*Text:* Champion Spelling Book, Section I. See Spelling, Section III, for General Discussion and Third Grade.

ARITHMETIC—*Texts:* Appleton's Primary Book, Chapters I, II and III, and Lippincott's Mental Arithmetic. See Arithmetic, Section III, for General Discussion and Third Grade.

NATURE STUDY—See Nature Study, Section III, for General Discussion and Third Grade.

HISTORY—(Story and Biography). See United States History, Section III, for General Discussion and Third Grade.

PHYSIOLOGY AND HYGIENE—See Physiology, Section III, for General Discussion and Outline of Work for First, Second and Third Grades.

DRAWING—Prang's Book Three. See Drawing, Section III, for General Discussion and Third Grade.

MUSIC—Congdon's Book II, or First, Second and Third Grades may together use Congdon's Book I.

Fourth Grade.

READING—*Text:* Jones Readers—Book Four.
Supplementary Readers:
Art Literature Readers (Fourth Reader).
Winslow's "The United States" of the Geographic Readers. See Reading and Literature, Section III, for General Discussion and Fourth Grade.

LANGUAGE—*Text:* Modern English, Book One, Part I to Lesson 62; Part II to Lesson 124. See Language and Composition, Section III, for General Discussion and Fourth Grade.

WRITING—*Text:* Berry's Book Four. See Writing, Section III, for General Discussion and Fourth Grade.

SPELLING—*Text:* Champion Spelling Book, Section 11. See Spelling, Section III, for General Discussion and Fourth Grade.

ARITHMETIC—*Texts:* Appleton's Primary Book Completed. Lippincott's Mental Arithmetic. See Arithmetic, Section III, for General Discussion and Fourth Grade.

NATURE STUDY—See Nature Study, Section III, for General Discussion and Fourth and Fifth Grades.

GEOGRAPHY—First Half Year. No text is to used this half of the year. See Geography, Section III, for General Discussion and Fourth Grade. Note that for the second half year Frye's First Course is to be completed to page 98.

HISTORY—(Story and Biography). See U. S. History, Section III, for General Discussion and Fourth Grade.

PHYSIOLOGY AND HYGIENE—*Text:* Ritchie-Caldwell's Primer of Hygiene, Chapters I to XXI inclusive. See Physiology, Section III, for General Discussion and Fourth Grade.

DRAWING—*Text:* Prang's Book Four. See Drawing, Section III, for General Discussion and Fourth Grade.

MUSIC—*Text:* Congdon's Book Three, or Fourth, Fifth and Sixth Grades may together use Book Two. See Music, Section III.

Fifth Grade.

READING—*Text:* Jones' Readers, Book Five.
Supplementary Readers:
Art Literature Readers, Book Five.
"Our American Neighbors."
Elson's Grammar School Literature, Book One.
See Reading and Literature, Section III.

LANGUAGE—*Text:* Modern English, Book One, completed. See Language and Composition, Section III.

WRITING—*Text:* Berry's Book Five or Book Six. Fifth and Sixth Grades should be combined into one class. See Writing, Section III.

SPELLING—*Text:* Champion Speller, Section III or IV. Fifth and Sixth Grades should be combined into one class. See Spelling, Section III.

ARITHMETIC—*Texts:* Appleton's Grammar School Arithmetic, pages, 1-120; Lippincott's Mental Arithmetic. See Arithmetic, Section III.

NATURE STUDY—See Fourth Grade.

GEOGRAPHY—*Text:* Frye's First Course, completed from page 98, in first half year; Frye's Higher Geography, second half year, pages 1-60, and West Virginia Geography. See Geography, Section III.

PHYSIOLOGY AND HYGIENE: *Text:* Ritchie-Caldwell's Primer of Hygiene completed from page 103. See Physiology, Section, III.

DRAWING—*Text:* Prang's Book Five. See Drawing, Section III.

MUSIC—*Text:* See Fourth Grade and Music, Section III.

Sixth Grade.

READING—*Text:* Elson's Grammar School Literature. Book One.
Supplementary Readers:
"Europe" of the Geographic Readers.
Teachers are urged to write Scott, Foresman & Co., Chicago, Ill., for manuals on teaching the Elson Readers. They are free.
See Reading and Literature, Section III.

LANGUAGE—*Text:* Modern English, Book One, Part III completed. See Language and Composition, Section III.

WRITING—Berry's Book Five or Book Six. See Fifth Grade. Fifth and Sixth Grades should be combined into one class. See Writing, Section III.

SPELLING—*Text:* Champion Speller, Section III or IV. See Fifth Grade. Fifth and Sixth Grades should be combined into one class. See Spelling, Section III.

ARITHMETIC—*Texts:* Appleton's Grammar School Arithmetic, Chapter IV; Lippincott's Mental Arithmetic. See Arithmetic, Section III.

NATURE STUDY—See Nature Study, Sixth Grade, Section III.

GEOGRAPHY—*Text:* Frye's Higher Geography, completed from page 60. See Geography, Section III.

UNITED STATES HISTORY—*Text:* Montgomery's Beginner's American History. Completed in first half year. No history in second half year. See United States History, Section III.

PHYSIOLOGY AND HYGIENE—*Text:* Ritchie-Caldwell's Primer of Sanitation; first half year pages 1-100; second half year pages 100-194. See Physiology, Section III.

DRAWING—Prang's Book Six. See Drawing, Section III.

MUSIC—See Fourth Grade and Music, Section III.

Seventh Grade.

READING—*Text:* Elson's Grammar School Literature, Book Two.
Supplementary Readers:
"Distant Lands" of the Geographic Readers.
See Reading and Literature, Section III.

LANGUAGE—*Text:* Modern English, Book Two, Part I and Part III to Lesson 16. See Language and Composition, Section III.

WRITING—Berry's Book Seven, or Book Eight. Seventh and Eighth Grades should be combined into one class. See Writing, Section III.

SPELLING—*Text:* Champion Speller, Section V or VI. Seventh and Eighth Grades should be combined into one class. See Spelling, Section III.

ARITHMETIC—*Texts:* Appleton's Grammar School Arithmetic, Pages 231-353; Lippincott's Mental Arithmetic. See Arithmetic, Section III.

AGRICULTURE—*Text:* Soule and Turpin's Fundamental Principles of Agriculture. Seventh and Eighth Grades should be combined into one class, using different materials each year. See Agriculture, Section III.

UNITED STATES HISTORY—*Text:* Montgomery's Leading Facts of American History; first half year, Chapters I-III; second half year, Chapters IV-VII. See United States History, Section III.

DRAWING—*Text:* Prang's Book Seven. See Drawing, Section III.

MUSIC—See Music, Section III.

Eighth Grade.

READING—*Text:* Elson's Grammar School Literature, Books Three and Four. See Reading and Literature, Section III.

LANGUAGE—*Text:* Modern English, Book Two. See Language and Composition, Section III.

WRITING—*Text:* Berry's Book Seven or Book Eight. See Seventh Grade. Seventh and Eighth Grades should be combined into one class. See Writing, Section III.

SPELLING—*Text:* Champion Speller, Section V or VI. See Seventh Grade. Seventh and Eighth Grades should be combined into one class. See Spelling, Section III.

ARITHMETIC—*Text:* Appleton's Grammar School Arithmetic. Completed in first half year. Lippincott's Mental Arithmetic. Bookkeeping takes the place of Arithmetic in second half year. See Arithmetic, Section III.

AGRICULTURE—See Seventh Grade and Agriculture, Section III. Seventh and Eighth Grades should be combined into one class, using different materials each year.

UNITED STATES HISTORY—*Text:* Montgomery's Leading Facts of American History, Chapters VIII and IX, completed in *first half year.* State History should be studied last half year. See United States History, Section III.

CIVIL GOVERNMENT—*Text:* Peterman's Elements of Civil Government. See Civil Government, Section III.

STATE HISTORY—*Text:* Lewis' History and Government of West Virginia. Last half year only. Read carefully instructions, State History, Section III.

PHYSIOLOGY AND HYGIENE—*Text:* Caldwell's Human Physiology. See Physiology, Section III.

DRAWING—*Text:* Prang's Book Eight. See Drawing, Section III.

MUSIC—See Music, Section III.

GENERAL HISTORY AND BOOKKEEPING.

Note: Unless there is a strong demand for these subjects they should not be taught as separate subjects. General history is believed to be too difficult for elementary pupils. Bookkeeping can be taught in connection with arithmetic. If taught at all, bookkeeping should be offered only in the second half year after arithmetic has been completed.

SECTION III

Outline of Studies by Subjects.

READING AND LITERATURE

GENERAL DISCUSSION.

General Statement.

Reading is the most important study in the curriculum. It is the most important study because nearly all the other subjects depend upon it. Arithmetic, geography, history and other branches are studied in large part through books which the pupil must read. It is important, moreover, because reading is the most convenient means that the children have, after they leave school, of informing themselves and of amusing themselves. Reading, then, is the key that unlocks the great store house of knowledge and wisdom, art and culture.

One of the fundamental aims of the school, therefore, is to teach children to read well, which is to read with ease, pleasure, rapidity, and intelligence. In fact, aside from nature study, agriculture, hygiene, and handicraft work, the curriculum may be said to exist, in part, for the purpose of teaching the child to read and write well in different subjects; and even the branches mentioned above are supplemented largely by reading. The teacher who can teach reading in the broad sense in which it is here used, is a good teacher.

Method of Teaching Primary Reading.

It follows, then, that the method of teaching beginners to read is very important. Reading is the art of getting the meaning from print and writing. Any series of exercises that enables the child to learn this art is a method of teaching reading. But some series of exercises are better than others, easier, more economical of time and energy, and lead more directly into the art of getting ideas from print and script. What is the best method?

If we examine the way in which the child learns to get the meaning from what he hears, perhaps we shall see how we should set about training him to get the meaning from what he sees on the printed page. The infant sees a certain animal with four legs, a body of a certain shape, ears and eyes and tail. He can recognize the animal when he sees it; but as yet, he does not know any name to apply to it. But he wants to know. His mother tells him it is a *pig,* and she

has him say the word until he can pronounce it. After some days of forgetting and being told, he succeeds in remembering that the sound *pig* is the sign of that animal. Now the name given to that animal might have been *gip* and the child would have been just as well satisfied. That is, the name is an artificial sign of the idea. No amount of observing the animal would have told him what its name is. That is something he has to learn as a separate bit of knowledge. Likewise he learns that *I* is a sound used by a person to represent himself when he is speaking and writing; that *see* is a sound used to stand for the act of looking, of using the eyes to observe. Finally if the sentence *I see a pig* is read, the child recognizes the sounds as representing ideas, and he learns how to express his own ideas by using these artificial sounds. In other words, he had learned that certain sounds stand for certain ideas, and he can articulate these sounds with the understanding that he is expressing ideas.

Observe five facts in this process: (1) The child has but learned the sound-signs of ideas that are already familiar to him. He has learned only how to *call* the things that he knew. He has mastered the artificial symbols of previously learned ideas; he has not acquired new ideas. (2) He has learned these names as whole, not as parts; that is, he has not learned the sound *pig* by learning separately the three sounds in the word, or by learning the three letters *p-i-g*; he has learned the group of sounds as a unit. (3) He has learned that each object and idea has its sound-sign, and by practice has developed some power of learning new sound-signs. (4) He has learned to understand sounds by hearing them often, and has learned to utter the sounds by imitation and practice. (5) He takes pleasure in the process, because he feels the desirability of knowing the names for the different objects and ideas.

Learning to read is a similar process. Instead of learning sound-signs, the child is now to learn print-signs. The idea is now expressed by means of printed or written letters combined in words and sentences, instead of by means of spoken sounds, combined in words and sentences. The child has now a double task. He must not only learn the print-signs of ideas; he must identify the print-signs with the sound-signs. The spoken word *pig* is a sign of the animal; the printed word *pig* is another sign of the animal; while the written word *pig* is a variety of the printed sign. However, this double task is not very difficult, since the child has already learned the sound-name; and as soon as he learns the print-name for the same idea, he associates the two names.

Just here one of the fundamental mistakes of teaching reading is often made: the teacher thinks the child's sole task is to directly associate the two names. As a matter of fact, the child's first task is to associate the print-sign with the idea; after he has done that, the readily associates the two names. That is, the child should be taught to get ideas from the printed symbols, not merely to pronounce the corresponding spoken symbols. There is danger that the child in reading his lesson may only associate the print-sign with the sound-sign; may only *pronounce words,* instead of *getting ideas.*

Naturally, then, the teacher must make sure that the child see and express the meaning; and in order to make sure, the teacher will have to perform a process similar to that of the mother when she taught the child the sound-names of ideas.

I. The teacher must teach the print-signs of these ideas that are already familiar to the child. To do this, she must call up the idea into the child's mind. She can do this in four ways.

First, she may have the objects themselves brought into the school room, or may take the child out to the objects, then have the child get reacquainted with them. If she wishes to teach the word *ball,* she can have the child handle the ball. When she is sure the child has the idea of *ball* in his mind, she shows him that the idea is represented by a certain sign, then she writes the word on the board and points it out in the primer. She repeats the word and the child repeats it after her. Other words she teaches in the same way, reviewing and repeating from time to time, just as the mother has done.

Second, if the idea is an action-idea, the teacher has the child perform the action, then teaches him the written and printed word that names the action. Thus she teaches *toss, catch, drop,* etc., by having the child perform the actions; then associates the action with the word written on the board, and pointed out in the chart or primer.

Third, if it is not convenient to have the object before the child, a picture is often used. This is one reason so many pictures are found in primers and first readers.

Fourth, often the teacher can bring the idea back into the child's mind by asking questions and starting conversations about the idea. This is not so good a way as the others, but it will serve.

The teacher may use any or all of these devices, but she must make sure that the children have the idea clearly in mind before the print-sign of the idea is presented; otherwise the child is likely to merely pronounce the word without associating it with the idea. The new

words must always be taught in this way until the child has gained the power of learning new words for himself. And, whenever the reading lesson contains an unfamiliar idea, the teacher must first make the idea clear before she tries to teach the word.

II. The words should be taught as wholes, not as parts. The mother taught the sound-sign of *pig* by enunciating the entire combination of sounds, not by uttering the three sounds one by one. The teacher should teach the print-sign of ideas by presenting the entire combination of letters and sounds. In other words, neither the a-b-c's nor the phonics should be taught first. The whole word represents an idea, but no part of it represents an idea; therefore, it should not be taught by parts.

As soon as possible the child should be taught to read whole sentences. As a matter of fact, a word rarely expresses a complete idea, while a sentence does. And, as reading consists in getting ideas from print or writing, the child should be taught to read whole sentences as units of ideas. This he can do almost from the beginning. As new words are taught, they are combined with old words in sentences. For example: When the child has read the sentence, "I see a pig," he can read sentences like "I see a dog," "I see a cat," etc., as rapidly as he learns the new words. If the child acquires the habit of reading sentences as wholes, and is taught to study a sentence through before he begins to read aloud, he will not form the habit, so fatal to good reading, of reading in the following fashion: "I" (pause) "see" (pause) "a" (pause) "pig," laboriously putting word to word and failing to perceive and express the meaning of the sentence.

III. The pupil has learned that each idea has its print-sign, just as previously he has learned from his mother that each idea has its sound-sign; and he has developed some power of learning new print-signs. Now it is evident that this power must be increased, so that he may learn for himself print-signs of familiar ideas. How is he to increase this power?

First, by being shown, that many words are alike in appearance and sound, and that he can learn a new word by its resemblance to a word he knows. Here comes in the teaching of phonics. The pupil knows the appearance and sound of certain words—the word *pig* for example. Other words resemble this: *big, dig, fig, jig, wig,* etc. With a little instruction, the child learns that *ig* has a certain sound. In the same way he learns that other letters and combinations of letters have certain sounds, until finally he can discover the pronunciation of new words by their resemblance to ones already learned. This

process of comparing a new word with old ones will come quite naturally and sometimes unconsciously; but the teacher must give a good deal of assistance. Very often a word is not phonetic; (that is, is not pronounced as it is spelled) but in most cases it has enough resemblance to a word already taught to help the child, with a little prompting, discover the pronunciation. Then, if the child has already formed the habit of associating the sight and sound of a word with the idea, he learns to discover the idea represented by this new word. In general, the exercises in phonics need not be complex, and they should arise out of the reading lessons.

Second, by inferring the meaning of a new word. For instance, suppose the child sees this sentence: "The sun rises in the east and sets in the west." If he knows the meaning of all the words except "west," he may be able to infer the meaning of that word. Pictures assist materially in this process of inference. This inference—guessing, as we call it—goes on constantly and is one of the unconscious ways in which the child learns new print-signs.

IV. The teacher must read for the pupils, so that they may learn through imitation; and must drill them until they recognize the word readily wherever they see it. As to the drill, the best possible way is to supply plenty of supplementary reading material, in order that the child may learn the new words in fresh combinations, and that his interest may be kept intense. Many teachers err in assuming that a child will master a word by learning it once; as a matter of fact, dozens of repetitions are necessary to fix some words in his mind. Drill is an absolute essential in teaching primary reading, but it is best to make this drill as interesting as possible by varying the material used.

V. The teacher must do her best to make the pupil feel the desirability of learning to read. The child learns to recognize the words he hears and to speak these words because he feels that it is desirable. Usually the child feels a desire to learn to read also, but often his desire becomes weak and must be strengthened. There are several ways of doing this.

First, the teacher may read poems and read or tell interesting stories to the children, and emphasize the fact that if they learn to read they may find and enjoy such stories for themselves. The teacher must be such a good oral reader that she will at once set a good model for imitation and start a longing in the pupils to read as well as she does. In the country school the child's desire to learn to read is often strengthened by hearing the older pupils read; and of course

the fact that the child's parents and older brothers and sisters can read is another stimulus.

Second, the children should have supplementary readers, so that they may continually be getting acquainted with fresh, interesting material. A child soon loses interest if he is forced to read the same book over and over. A number of suitable books should be at the child's disposal in the school library.

Third, the teacher should introduce the lesson in such a way as to create in the children a desire to learn to read it. A few pointed, suggestive questions and remarks bearing on the coming lesson and hinting at what is to be found, will often stimulate a desire to become acquainted with it.

Fourth, the teacher should clear away the difficulties that are too great for the children to conquer. When the lesson is being assigned, she should lead the children to understand the unfamiliar ideas and the difficult words, and should plant within their minds the suggestions that will enable them to read with ease and pleasure.

Fifth, the teacher should be patient with the children, remembering that learning to read is a complex and difficult mental act; and that harshness, or even impatience, often crushes the desire to learn.

Summary of Method.

Let us summarize the method of teaching primary reading. (1) The pupils should be taught sentences and words as wholes. (2) The words taught should represent familiar ideas, and the ideas should be brought up into the child's mind before the print-signs are presented. (3) The new words should be taught in groups, so that the child will learn the separate sounds as soon as possible; and the teacher must help him form the habit of discovering new words through their resemblance to the old. (4) Constant imitation and repetition are necessary to fix the words in the child's mind. (5) The teacher should strengthen the child's desire to learn to read and should make the process as pleasant and interesting as possible. (These are the essentials of the method. It may be said, however, that many variations of the method must be employed to fit different children.)

The Alphabet.

Incidentally the alphabet is easily learned. The teacher must remember that the names of the letters of the alphabet are decidedly different from the sounds of the letters, and they have to be taught as separate bits of information. Moreover, they have little or no

connection with learning to read. Suppose the child learns the letters in the word *dog*. If he spells them out, he pronounces *deeogee*, which is certainly not the way to pronounce the word and gives little clue to the pronunciation. But after the child learns to read, he feels some curiosity about these different characters and willingly learns their names. Of course, he must know the alphabet names before he can spell orally; but this need not come before the end of the first year. He need not know the letters in their order (a, b, c, d, etc.) until it is time for him to consult a dictionary; though, of course, he will usually learn them much sooner. The names and order of the letters are often taught by means of an alphabet song.

Reading Versus Literature.

The child should have a basal primer, a reader and at least two or three supplementary readers in the first grade; and in each of the grades above the first, he should have at least one supplementary reader. These readers will consist of two kinds of material: informational reading matter and literature. The difference is implied in the names. The informational reading matter consists of lessons designed to give the child knowledge of various kinds. The literature consists of poems, stories, etc., designed to arouse his emotions, and increase his enjoyment and his love of beauty. Of course, these two overlap: informational reading matter often has some of the qualities of literature, and literature often gives the child information and knowledge; but the two should be distinct in the teacher's mind, since they should be taught in different ways.

The literature should predominate all through the grades, since the pupil has access to much informational reading matter in his various text-books; and after the fifth grade, reading ceases entirely as a study, in the remaining grades literature taking all the time previously given over to both literature and reading. A good many teachers think that literature is not as important as informational reading, since it does not teach the children facts. On the contrary, the arousing of good, pure, strong feelings is about the most important act a teacher can perform, since it is feelings that urge to good or evil and that make or mar these boys and girls who are the future citizens of the republic. Time spent upon the reading of good literature is time very well spent.

The informational reading matter is the material upon which the mechanics of reading should be based. The teacher should always introduce the lessons, of course; and, in the first year, she will have

to assist the children with new words and unfamiliar ideas and to read aloud to furnish them a model. But, after that, since the reading is usually direct and straightforward prose and presents few mental difficulties, she should shift the burden of work upon the pupils. They do the reading aloud, and the teacher takes advantage of the situation to teach proper position, best way of holding the book, new words, spelling, pronunciation, enunciation, inflection, and quality of voice—in short all that which we call the "mechanics" of reading.

In the teaching of literature in the lower grades, the teacher's work is more difficult. She must present the lessons in such a way as to arouse the pupils' interest, and to give them hints that will assist them to enjoy the selection; and in the conduct of the lesson, she must help the children get into the spirit of the selection, fill in the details of the scene, become intensely interested in the contents and saturated with the emotions. Then she must read aloud, naturally, pleasantly; and must have the children read after her. The purpose of the lesson in literature is not to teach the mechanics of reading, but to start healthy emotions and train the children in the appreciation of literature, so that they will like to read it after they leave school. The teacher should, therefore, not emphaize the mechanics of reading, but the spirit of the selection—though, of course, the work in literature will do much incidentally toward making the children better oral readers.

Oral Reading.

As the children advance in the grades the teacher should drop more and more into the back-ground. Instead of reading first, she will now have the children read first, so that by the time they have finished the eighth grade they can read expressively and intelligently, without the teacher's assistance. The teacher should not make definite and binding rules for reading aloud; she should train the children to express themselves according to the natural spirit of the selection or passage, reading gayly or sadly, loudly or softly, rapidly or slowly, as the emotion suggests. She should not make rules as to how long to pause after a punctuation mark. That depends entirely upon the meaning and emphasis. The teacher should be extremely careful not to let poetry be read in a sing-song manner. Poetry is measured off into accented and unaccented syllables; and there is a tendency, when one gets into the strong swing of the meter, to keep this meter strictly regular. Sometimes this spoils

the meaning and interferes with the musical qualities of the poetry. The children should be taught to read for the meaning and emotion and to disregard the metrical accent whenever it conflicts with the natural accent.

Silent Reading.

The teacher should train the children in silent reading, since most of their reading in later life will be silent. They should always read silently before they read orally; and sometimes the teacher should merely examine them as to the content of the informational reading matter without asking them to read aloud. (The literature, especially the poetry, should be read aloud; and in the upper grades the children should take their books home and read aloud in preparation for the recitation.) There should be many suitable books in the library that the child may read in school or at home, and the teacher should encourage rapid but intelligent silent reading in these books. Often she should ask questions to make sure that the children have mastered the subject matter. The teacher should urge the children to read much, and should train them in the power to enjoy and appreciate books, to the end that they may form good reading habits which will remain fixed after the children leave school.

Dramatization.

The teacher and the children should occasionally dramatize a literature lesson—that is, make a play out of it. In a story in which there are several characters, let the children take the place of the different characters and play out the story, making up the conversation as they go along. They do not need a stage or costumes or elaborate stage furniture or objects; they can do very well with what they find in the school room. Occasionally they may give a public performance, with home-made costumes. Dramatizing is not difficult, and it is one of the best possible ways of realizing and appreciating a story. After the children have dramatized plays for some time, they will begin to see more clearly the dramatic qualities in what they read, and will read with more understanding and enjoyment.

Correlation.

The teacher should constantly correlate the reading and literature with the other branches. If, for example, you are studying the Civil War period, it would be well to have the children study Whitman's

poem, "My Captain," and Lincoln's Gettysburg Speech, and any other selections that fit in well with the history. If you do not happen to be at those particular lessons, turn to them anyway. It is of little importance whether or not you study the lessons in order, and it is of great importance that you study the lessons at the time when they will have the most significance.

The teacher should also teach reading in connection with the other studies. The pupils should be taught to read the arithmetic problems as intelligently as they read their reading lesson, for often they fail to solve the problems because they have not really read them. They should be taught to get the ideas out of their geography and history lessons in the same manner as they do out of their reading lessons.

General Outline of Work.

In the first five years, Jones' Readers are used as basal readers. Supplementary readers are suggested under each grade. In the last three years, Elson's Grammar School Literature Readers are used, with supplementary work as suggested in the following pages.

The mechanical elements in learning to read should be largely mastered by the end of the third or fourth year; that is, by the end of this time, the children should be able to master the subject matter of the lessons with ease and rapidity, and should be able to express the meaning intelligently and clearly. The reading process by this time should be largely unconscious; the child should not have to work consciously and laboriously at his reading lesson any more than he has to labor hard to do his speaking. Through the remaining years of the course the emphasis should be placed upon the literary phases of reading: development of imagination, stimulation of emotions and love of beauty, ability to fill in the details of the story; and the power to express the meaning and spirit of the selection naturally and pleasingly.

The following books deal with the teaching of reading. It would be well for the teacher to purchase at least two or three of these books: Arnold's "Reading and How to Teach It", (Silver, Burdett & Co., New York); Briggs and Coffman's "Reading in the Public Schools" (Row, Peterson & Co., Chicago); McMurry's "Special Method in Primary Reading" (D. C. Heath & Co., Boston); Clark's "How to Teach Reading in the Public School" (Scott, Foresman & Co., New York). A book that deals especially with the teaching of literature is McMurry's "Special Method in Reading of English Classics" (Macmillan Co., New York).

FIRST GRADE.

The best authorities agree that we have hitherto given too much time to primary reading, to the exclusion of other subjects more important to children of this age. The first year of school life should be given to the child's "own experiences," to use Prof. Huey's expression. Nature study, hand-work, story-telling, memorizing poetry, conversation about the child's home interests, and group games are the most important means of leading the child from home life to the larger, more organized life of the school. Reading in the first year should be subordinated to real life. For example, directions for hand-work and for playing games may be written on the blackboard instead of being given orally. In this way children learn that reading is a means of communicating thought, since they cannot do the desired thing unless they can read the directions. This habit of connecting action with reading should begin with the first school year.

Children should learn in the first year the printed forms of from three to five hundred words used in their daily speech. (No word not in a child's vocabulary should occur in his reading.) Also his ear and his vocal organs should be trained to recognize separate sounds recurring in familiar words, for example: *d* in dog, dark, do, and down, should be recognized as the same sound occurring in different words.

Begin reading in the first grade by reading to children, telling stories, and having them memorize verses. All these activities prepare the way for reading. The first reading by children must be based on the children's own activities and interests. Begin with action words and the names of familiar objects in the room. In every case connect the written symbol with the action or object it represents. The teacher calls Frank to her and whispers to him "run." She then says, "This tells the secret I told Frank. I said to him 'Run'". And she writes the word on the board. Other devices for connecting the word with the action will suggest themselves to the teacher. To teach the names of objects she may write the name of "Sand," "Book," "Ball," "Window," etc., and pin the name on the object it represents, so that these words will be learned by association.

For the first few weeks children's reading may well be limited to the interpretation of action words and names of objects. It is not necessary at this time for children to do any oral reading. Silent reading must precede oral in every case. Much bad reading is caused by insisting on oral reading from the first.

After children have learned to act in response to written symbols, (for example, "Throw the ball," "Catch Tom," "Close the door") continue reading by using the rhymes children have memorized. Write on the board a rhyme that does not contain unusual words. Suppose this rhyme is selected:

"This little pig went to market,
This little pig staid at home,
This little pig had roast meat,
This little pig had none,
This little pig cried 'wee, wee, wee,
They've left me all alone.'"

Let the children say the rhyme over, counting their fingers for the pigs as they say it. Then tell one child to "read" the first line as you write it on the board. Call on another child to read the next line, and so on. The children are thus really reading, although they do not know the separate words. The approach to reading is easy and natural, not painful and artificial as it often is when words are built up from their sounds or letters.

Have words from the rhyme written on cards. Select only the words children will be apt to use again, as "this," "little," "pig," "went," "staid," "home," "cried," "me." Hold up the card for "this" and ask the children to find a word like it on the board. Ask what the word says. Do the same with the other cards. When a child hesitates ask him to say over the rhyme until he comes to that word. He thus learns to rely on himself. Play a game to see who can find and call most words. Continue work of this kind with memorized rhymes until children have built up a word list they can recognize at sight. Be careful to vary the work enough to keep up interest in it. It is a mistake to stay long on one rhyme. Begin daily word drills in the form of games, as varied in character as possible. Have these drills at a different time from the reading lesson.

After children have learned forty or fifty words, combine these words with others to make sentences about familiar things. Write a sentence on the board and ask the children to read it. Let children whisper sentences to the teacher, who will then write " a secret" on the board for children to guess. There is a real motive for reading in this kind of work. For example, the teacher will say, "Who will tell something he saw on the way to school?" "Come and whisper it to me." Billy comes up and whispers, "I saw a horse." The teacher says, "See if you can tell what Billy saw." She writes the

sentence on the board, and tells the children any new word that they have not had before, "horse," for instance. Now she asks other children to read the sentence and tell what Billy saw. Skill must be used to avoid too wide a range of words.

Blackboard work and word drills should be continued for some time—one to three months—before taking up a book. There is really a saving of time in postponing the use of a book. When the book is first used children should be taught how to hold it and to turn the pages. Do not allow children to hold the book closer than fifteen inches from the eyes, because a large amount of eye-strain is the result of close reading. The book must have very large print for little children. From the beginning children should learn to read to the class, not exclusively to the teacher. They should share their thought with their audience, and to do this the book must not be held between the child and the audience.

Phonics: Rhymes make a good introduction to phonics. Through them children notice similar sounds in words, and learn to build up "families" of words. Jill, hill, down, crown, may easily lead to other words of similar sound. The phonic work of the first year should be informal, and should consist of games. For example, pronounce dog, did, Dot, and ask children to tell you other words that begin in the same way. Then write "d" on the board, giving the sound and asking children to give the sound also. Be careful to give the correct sound —not "duh." Take up all the initial consonants in this way. This phonic drill or play should come with the word drill, not with the reading lesson. Little more than this should be attempted in phonics the first year. Indeed, many authorities think phonics should not be begun until the third school year, because it holds the child to an analysis that taxes him too much. However, if the work is taken up as play rather than as uninteresting drill, this objection would be overcome.

Complete Jones' First Reader and two or three supplementary readers in this grade.

SECOND GRADE.

Complete Jones' Second Reader during this year. In addition have the children read two or three supplementary books emphasizing the literary side of reading. Hazard's "Three Years With the Poets" (Houghton Mifflin & Co., Boston) contains excellent poetry for this grade and for the third and fourth. If the children get the book for the second year, they should read only the first section. Free

and Treadwell's "Reading-Literature" is excellent. (Row, Peterson & Co., Chicago.) Lucia's "Peter and Polly in Summer" (American Book Co., Cincinnati) is a series of excellent stories for this grade. Perrault's "Tales of Mother Goose" (D. C. Heath & Co., New York) furnishes nursery tales for this and the third grade.

Do not attempt to teach the lessons in the order in which they come in the book, but rearrange them to suit circumstances. For example, teach the lesson on page 101 just before or just after the children have had a party. Teach the lesson on page 124 after a light fall of snow. Teach the lesson on page 177 in connection with the nature study lesson on the toad.

In general it is well not to read in one book until it is finished, but to change from one book to another, selecting the lessons that will fit best with the seasons, the interests of the children, their other work, etc.

Emphasize this year, work in phonics, acquiring of new words, ability to read rapidly, to read aloud intelligently and expressively. Care must be taken in assigning lessons, so that the pupils may have their interest aroused in the subjects and may be put on the hunt for the ideas. For instance, in assigning the lesson on page 78 it would be well to begin by asking the children if any of them have ever seen the wind. After you have talked about that with them, and they have agreed that they have never seen the wind itself, you ask them how they know when the wind is blowing. Ask them whether the wind is blowing harder when "the leaves hang trembling" or when the "trees bow down their heads." Finally you tell the children that you are going to read to them a poem that tells about the wind blowing through the trees. Always take some time in assigning a lesson, and always prepare your assignment at least a day in advance, so that you may know just how you are going to introduce the selections.

In the recitation it is best not to ask the child to read one paragraph or one sentence, because perhaps that is not a natural stopping place. You had better study the lesson with the children and divide it up into sections.

Dramatize some of the lessons. The story on page 91 serves well for this work. Have the lesson studied first, then have the story retold orally. Now ask for four pupils to take the parts of Rus, Fus, Mus, and Tabby Cat. The three mice talk together about building new houses. Rus gets some hay and scatters it in a circle, then gets in it. Fus uses paper in the same way. Mus uses books, which he

calls bricks. Then Tabby Cat comes up to Rus' houses and says, "Please let me in." Rus answers, "Oh, no; you can't come in," but Tabby Cat reaches in, drags him out, and pretends to eat him. The rest of the story is played as suggested by the incidents in the story.

The teacher should tell and read many good stories to the children in this grade. This provides interest and entertainment, gives good material for language conversations, and inspires a desire to read.

Have the children commit many poems to memory. They should be asked to commit only those poems which they have studied and understand fairly well.

THIRD GRADE.

Read Jones' Third Reader in this grade. As there is little literature in this book, some supplementary books containing literature should be used. Free and Treadwell's "Reading-Literature" Third Reader (Row, Peterson & Co., Chicago); Heart of Oak, Book Two (D. C. Heath & Co., New York); and Stevenson's "Child Garden of Verses" (Rand, McNally & Co., New York) are excellent. Have these supplementary books bought near the beginning of the year, and change from one to the other, as you think best.

Continue phonics work. The common diacritical marks should be mastered in connection with the reading and spelling.

Give persistent practice in reading aloud. Insist on distinct enunciation. Break up habits of reading too fast or too slow, too loud or too low. Do not let any reading pass that does not express the meaning. This implies that before a pupil is called upon to read aloud, the teacher must have satisfied himself, by questioning, that he understands what he is trying to express. If the pupil has formed the habit of reading only one word at a time, ask him to read each sentence through silently before he reads aloud. All unfamiliar and difficult ideas must be learned before the oral reading begins. For example, on page 203, sentence ten, the pupil must be led to see what this sentence means, "The cord was doubled," else the story cannot be clear and convincing.

Very often the story in the lesson will not tell all the details, but will leave them to be inferred. This is especially true in poetry. The teacher must be sure that these details are understood. For example, on page 142, section 7, when the mother looks at her daughter, and smiles and the girl says, "Yes, indeed, Mamma," the teacher must

understand and teach the children to understand what the mother's look and smile mean.

Continue dramatization. Ask the children to reproduce orally some of the stories read. (See Language and Composition, Third Grade, page 70.)

Teach the spelling of all the useful new words. It is not necessary to require the children to learn the spelling of all the proper nouns or the unusual words.

Keep in mind the difference between informational reading matter and literature. (See page 51.) The teacher should study each lesson before she assigns it, that she may know whether she is going to present it as literature or as reading matter.

Occasionally have a "sight" lesson. In this you introduce the subject as usual; but instead of assigning the subject for the next day, you take it up at once. The children read silently through the lesson as fast as possible. Then the teacher asks questions until she is sure the pupils understand the thought. They then read aloud. This plan encourages rapid reading, and reading for the main outline.

Have the children learn many poems by heart.

FOURTH GRADE.

Read Jones' Fourth Reader in this grade. Some supplementary books are: Heart of Oak, Book Three (D. C. Heath & Co., New York); Farm Life Readers, Book Four (Silver, Burdett & Co., N. Y.); "Robinson Crusoe" (Houghton Mifflin Co., Boston, Mass.)

Use care in assigning the reading lesson. (See page 58.) Train in rapid silent reading. To do this have much sight-reading, limit the time for the preparation of lessons, and encourage much home reading of library books. Occasionally do not have the lesson read but merely retold. Let the children see that silent reading is very important, since it is more rapid than oral reading, and since they will be expected to read silently more than orally when they are out of school. Teach the children not to move their lips when they read silently.

The pupils should be thoroughly trained in dividing a lesson into sections. This is done by having the child state the substance of each paragraph before or after he reads, or make an outline of the story, or reproduce orally the essentials. In the lesson on page 107, (Book Five) for example, the story naturally divides itself into the following parts: First two paragraphs, preparations; third paragraph, putting on the helmet; fourth and fifth paragraphs descent;

sixth, seventh, and eighth paragraphs, the diver's jumping lesson; ninth paragraph, the current; rest of the lesson, the ascent. In the lesson on page 94, (Book Five) the first line makes a general statement; the next seven lines describe the grasshopper, the last six lines describe the cricket. Every lesson has its outline; and the lessons are not well learned until the main points in the outline are discovered. Correlate this study with the making of outlines in the composition work. (See page 74.)

The pupils should be led to see that some lessons are to be read rapidly and for the story, while others are to be read slowly and for other points. For example, the poem on page 64 (Book Five) must first be read through for the complete thought, then must be re-examined line by line, while the lesson on page 22 should be read quite rapidly.

Connect the lessons with the work in the other branches. The lesson on page 187, for example, will go well with the history lesson on the Pilgrims. Be sure also that the lesson fits in well with the season of the year. For instance, the poem on page 148 should be taught near Christmas time.

Continue memorizing. Many teachers have the idea that only those selections which contain moral truths or practical precepts should be committed to memory. As a matter of fact, beautiful poetry should be memorized, whether it has any direct moral lesson or not. The selection on page 127, with its music and pictures and its appeal to the imagination, should be stored away in the mind along with the lesson in the selection on page 200, with its eloquent statement of truth.

Watch the children in their reading in all their textbooks. For instance, in the arithmetic lesson have the examples read intelligently before the solution is attempted.

It is well to read in the fourth grade, and in each grade beyond, one long story in the class each year. "Robinson Crusoe" is good for this grade. Assign two or three chapters at a time; then in the recitation have the story in these chapters told orally, and a few paragraphs read orally. Remember that the emphasis in this year, and in all the work in reading to follow, should be placed upon literature rather than upon mechanical reading.

FIFTH GRADE.

Use Jones' Fifth Reader in this year. Good supplementary books are: Heart of Oak, Book Four (D. C. Heath & Co., Boston); Farm Life Readers, Book Five (Silver, Burdett & Co., New York);

"Studies in Reading," Fifth Reader (University Publishing Co., Chicago).

Jones' Fifth Reader is not very large book. If you find it necessary to omit any, however, let it be those selections that seem too complex and subtle for the children's comprehension, or those that deal with subjects less interesting. Better yet, read only a part of this volume in the fifth year and read the remainder in the sixth year.

Many of the selections in this book are difficult—so difficult that the teacher must be constantly on her guard lest her pupils miss the point of some splendid story or poem. You can usually tell whether the pupils understand by the way they read. If they have failed to perceive the meaning, you should question them until they do perceive it; then, have them read again.

When the children read poetry, insist that they bring out the thought, regardless of the rhythm. There is a natural tendency to make a pause at the end of a line. Sometimes this spoils the sense. For example, in the poem on page 222, there should be no pause after the fourth line, but the next pause should be in the fifth line after the word "Occasion".

After the children have learned to appreciate a selection, it is well to call their attention to the author and the other selections of his that the children have read. There is an index of authors at the front of the reader. It might be well occasionally to read all the selections of one author in succession. Refer the children to library books by the same authors. For example, after your pupils have read the selection on page 175, it should not be difficult to get them interested in "The Christmas Carol." Do not spend much time on the biography of authors.

SIXTH GRADE.

Complete "Elson's Grammar School Literature," Book One. The supplementary reading should be in the longer classics. Some good ones are: "Some Merry Adventures of Robin Hood" (Charles Scribner's Sons, New York); Wood Folk at School" (Ginn & Co., New York); "Pinocchio" (Ginn & Co., New York).

Elson's books are full of most excellent literature. The teacher should remember that literature does not exist primarily for the purpose of imparting information, but of arousing and guiding the emotions; and she should be dissatisfied with any literature lesson that does not accomplish this. Of course, there is often decided intel-

lectual value in the selection, but that should come after the feelings have been stirred.

It is almost impossible to give brief, specific directions for teaching a literature lesson. (The teacher should show the children how to use the lesson helps in the readers. These are very valuable as they direct the children's attention to the important phases of the study. Every teacher should have the manual that goes with the readers.) The usual method of procedure is as follows:

First, assignment. In the assignment the teacher should ask questions designed to connect what the pupil already knows with that which the lesson has to give. For example, in the lesson on page 114, the children might be asked to bring in specimens of jack-in-the-pulpits; anemones, and other flowers mentioned in the poem. They should note the queer shape of the flower and discuss the appropriateness of the name. If Jack really was a preacher in the pulpit, what would be his church, what would serve as a church bell, who would be his hearers, and what would he preach about? After this assign the lesson, telling the children that they may now study a poem about jack-in-the-pulpit.

Second, preparation of the lesson by pupils. (a) The pupils should be trained to read silently through the whole selection rather rapidly in order to understand the principal thought, the predominant emotion, and the different sections. For example, in the poem referred to above, the principal thought is the fancy of jack-in-the-pulpit being a real preacher. The predominant emotion is love of nature. The sections are three, arranged in three stanzas. (b) Then he should silently study the poem more carefully sentence by sentence, trying to appreciate the meaning and force of the words, to see the pictures, and fill in details intentionally omitted by the author, to understand the figurative language, etc. If the words are familiar but evidently have unusual meanings to the pupil, try to infer the meaning from the context. If the words are entirely unfamiliar or the pupil cannot get the meaning from the study of the whole sentences, he should look up the word in the dictionary. (c) The pupil should then read aloud, trying to bring out the main thought, the significance of the details, and the spirit or mood of the selection, in a natural, intelligent and musical manner. In the poem on page 114 the spirit is gay and lively. There is danger that the reading may be too rhythmic: that the children may be so carried away by the swing of the meter that they spoil the meaning and make the reading monotonous.

Third, recitation. (a) The teacher asks questions bearing on the main thought and the details, designed to show the pupils' knowledge and appreciation, to see if the pupil has filled in the outlines, understands the figurative language and unusual words, etc. She covers the same ground that the pupils have gone over in their preparation, though, of course, she will bring up points the children had not thought of, and will give suggestions that will lead to new ideas. (b) After a frank and free discussion, the poem should be read aloud. Sometimes the teacher reads first, sometimes the pupils; but the teacher should always read at least a part of the lesson. The oral reading should show appreciation and understanding, and should be natural and expressive. Special attention should be given to the oral reading. Do not encourage "elocutionary" reading; insist rather on simple, natural, appreciative and pleasing expression of the thoughts and emotions, and remember that the oral reading, if it is to be really expressive, must come after intelligent study; the children cannot express the meaning until they know the meaning to express.

Fourth, application. The selection should not be allowed to sink out of sight in the children's minds. It should be used in some way. (a) It may be memorized. (b) It may be assigned for composition or language work. (c) It may be used to illustrate or explain a lesson in some other subject. (d) It may be applied to some incident of the school or home life. (e) It may be referred to later in studying other literature.

A slightly different method must be followed in the teaching and studying of selections that are too long to be covered in one recitation. In this case, the teacher should assign a chapter or two at a time, in order to get through the selection as rapidly as possible. The preparation and recitation should be concerned with questions and discussions as to the story, what may be expected to happen next, the characters, and how they develop and react on each other, the connection and significance of incidents, the mystery and suspense, etc. Then when the selection is finished, it should be reviewed rapidly to get the entire story, the general theme and aim, the outline of the plot, the lesson, the general characteristics, the characters, etc. The pupils should be encouraged to read many library books, and to pursue the same plan in this reading that they do in class study.

If the children have kept up the dramatization, they should be able to give quite ambitious plays in the sixth grade. The girls can make the costumes and the boys can provide the "properties"—that

is, the objects needed in the play. Invite the parents in occasionally. Some work of this sort will help the children to study and appreciate the characters and action in all that they read.

Some magazines, such as the Youth's Companion (Perry Mason Co., Boston) and "Saint Nicholas" (The Century Co., New York) should be in the school room. Perhaps some subscriber in the neighborhood will lend them to the school, after they have been read. Encourage the children to read these.

SEVENTH GRADE.

Complete the second book of "Elson's Grammar School Literature Readers." Supplementary reading should be in the longer prose and poetic classics. The year's work might consist of reproductive selections from Irving, Poe, Hawthorne, Longfellow and Clemens. Incidentally some instruction may be given concerning the lives of these authors, but this should be brief and informal. One of Cooper's stories might be studied, partly in class and partly in home readings. "The Last of the Mohicans" is particularly good.

Suggestions for teaching literature have been given under the outline for sixth grade. (See page 63.) Make the work more mature, as befits the age of the pupils and the nature of the literature. Give elementary but definite instruction about the fundamental laws of artistic writing: unity, coherence, proportion, development of plot, grouping of characters, use of descriptive passages; and give some instruction in meters; kinds of poetic feet, principals of rhythm and rhyme, alliteration, and assonance.

Have the children memorize and recite literary selections in the literary society. In case the child does not memorize easily, allow him to read a well prepared selection from the book.

Encourage much reading of library books. The teacher should be familiar with the books in the library, and should often refer her pupils to them. The course in reading and literature that does not succeed in getting the children into the reading habit has failed in one of its important functions. Show the children how to "get the heart out of a book;" how to perceive the central idea and purpose, the leading characteristics, how the book differs from other books. Remember that the boys and the girls often want and need different kinds of books. The ideal is: Read much, read rapidly, read with intelligence and appreciation. Let the children take the books home with them or read in the school room when they have leisure.

EIGHTH GRADE.

Read Books Three and Four in the Elson Grammar School Literature Readers. In case the children cannot buy both books, have them get Book Four rather than Book Three. Supplementary reading should be in the longer classics. If American authors have been studied in the seventh grade, British authors might be taken up in this year. Scott's "Ivanhoe," Stevenson's "Treasure Island," and poems of Wordsworth, Scott, Tennyson, Macaulay, and Kipling, are valuable for this grade.

Continue the study as suggested in the sixth and seventh years. The children should learn to understand and appreciate the splendid characters in the books they read, should know them as familiar friends, should allude to them in their conversation, should admire and imitate their virtues. They should discuss and debate the various points that arise in the action, just as they do in real life.

Continue dramatization. Continue the reading of literature in literary society. Continue the reading of books in school and home libraries. Encourage children to start a small library of their own. Teach them how to discriminate between choice books and the trashy ones they sometimes find. Try to persuade each child in the eighth grade to read one book a month during the year.

LANGUAGE AND COMPOSITION

GENERAL DISCUSSION.

Aims of the Course.

The aims of the course in language and composition are:

1. To train the child to examine subjects within his comprehension; to choose, reject, and organize his material on these subjects; to present in speech and writing his thoughts on these subjects in an orderly, pleasing, and effective manner.

2. To train the child in desirable language habits. Some of these habits are:

(a) The habit of speaking and writing with ease and pleasure and with clearness and correctness.

(b) The habit of using vigorous, idiomatic, expressive words arranged in free, natural sentences, which, in turn, are arranged in compact, unified paragraphs.

(c) The habit of taking care that his language be effective and of taking pride in his linguistic power.

(d) The habit of using mechanically the various formal elements of speaking and writing; such as correct pronunciation, distinct enunciation, spelling, paragraphing, punctuating, etc.

General Outline. *

It is obvious that since the child is using the language from the time he enters school, training in language must be started at once. During the first two years, however, the language work should not be given a special period on the daily program, but should be connected with the other work of the school, especially with reading and literature. Throughout the entire course, language should be taught in connection with the other work of the school. It is a serious mistake to give the pupils the impression that the language work is over when the language period is spent. Encourage free, vigorous conversation in connection with all the branches. Teach the children to organize their thoughts and insist upon their using clear, definite, and correct words. This incidental language work is often the most educative, since it connects the language more closely with the child's life. In

*A definite outline is given in connection with the work of each school year.

the third year a separate period should be given to language, though the pupils should not use a text. From the fourth year on the pupils use the text and have a definite period.

The composition work should never have a separate period. In the first and second grades composition work is largely oral and should be combined with the regular language work. From the third grade on some of the language periods should be used for composition work.

No text in composition work should be used until the seventh grade. In this and the eighth grade the pupil should use the section on composition writing in the last part of the second book of "Modern English."

Since the work of the first three years does not provide for a text book, the teacher must suggest the material and direct the work. In order to do this she should have two or three language books from which to get suggestions, ideas, plans, and exercises. These books will be valuable also for work above the third grade, since they will provide material for supplementary work. The following language books are suggested:

Live Language Lessons. 2 books. University Publishing Co., Chicago. (Especially good for country and village teachers.)

Primary Language Lessons. 1 book. American Book Company, Cincinnati.

Studies in English, The Language Book. Row, Peterson & Co., Chicago.

Guide Books to English. 2 books. Silver, Burdette and Company, New York.

The teacher should have and study two or three good books on the teaching of language and composition. Teaching in these subjects is so important and so difficult that the teacher needs all the assistance she can secure. The following are suggested:

Barnes—English in the Country Schools. Row, Peterson & Co., Chicago.

McMurry—Special Method in Language. Macmillan Co., New York.

Hinsdale—Teaching the Language Arts. D. Appleton & Co., New York.

FIRST GRADE.

The language and composition work of this year should be almost entirely oral. All the writing that should be done is the copying of words and sentences, memorized selections, etc., marks of punctuation

being copied without explanation. Spelling may be copied, and occasionally a sentence may be dictated by the teacher and written by the pupils. Do not expect any original composition this year.

The basis of this year's work should be informal conversation. Nature study, pictures, literature read, stories told by the teacher, the interests and experiences of daily school and home life, the seasons and holidays will furnish sufficient material. The teacher should try to get the children to talk freely, easily, naturally and correctly on the topics brought up. Children should answer in complete sentences.

Attention should be given to such sentences as: "John and *me* want to play." "I ate *a* apple." "There *is* two birds on the tree." "I *ain't got* my lesson." " He *has went.*" Correct these and similar blunders without explanation, but always give the correct form and have the child repeat it. Enlarge the child's vocabulary by suggesting a better word instead of the one he has used. Make these conversations informal and pleasant. Always base them on topics interesting to the children.

Some reproduction work can be done. The teacher tells or reads an interesting nursery tale, such as "The Three Bears." The children ask and answer questions about the story until it is well understood. Then they tell the story as effectively and dramatically as possible. Very little criticism of the language should be allowed, since the pupils should be encouraged to reproduce with confidence and pleasure. Mistakes in accuracy of reproduction and the most serious errors in language should be pointed out after the story has been retold.

Some of the simpler stories told or read should be dramatized. Some of the Mother Goose Jingles furnish good material. (See page 53.)

SECOND GRADE.

Oral English should be the basis of this year's work. Continue the conversations as in first year, based on literature, pictures, nature study, field excursions, games, activities, etc. Ask questions that involve several related sentences in the answer, such as, "How do you make a paw-paw whistle?" "How do you sweep a room?" "How do you play prisoner's base?" Train the children in sticking to the story, in proper position while standing, in speaking directly to the other children instead of the teacher, in distinct enunciation and easy conversational tone. Incidentally correct such errors as "I can write

good," "Mother *learned* me my lessons," "John *don't* know how to play," "I *taken* my slate home." Train in the use of "shall" and "will," "may" and "can," the common irregular verbs, etc.

Try to enlarge the pupils' vocabulary. Teach them to distinguish between easy synonyms.

Continue oral reproduction of stories. Encourage the children to retell stories they have learned at home. Train the children to make up and tell simple stories based on pictures. Train them to tell the essentials of stories they read, leaving out details.

Dramatize, as in the first grade.

Study a number of fables with the children, and encourage them to make up simple fables of their own and tell them orally. Here is a fable told by a second grade pupil: "Once a rabbit was running away from some dogs and he wanted to get into a hole in some rocks. But some dirt had got into the hole. He got into another hole and got away from the dogs. Then he said, 'Tomorrow I will go and dig that dirt out, so I can get in the next time.' But the next day he forgot all about it. A few days after, the dogs got after him and were close behind him. He ran up to the hole and could not get in, and the dogs caught him before he could run into another hole. It served him right for being so careless."

The written work should be very simple in this grade. Copying, writing from easy dictation, writing of spelling lists and of memory selections is recommended. Some class exercises in original composing should be worked out. For example, the teacher asks the children to make up sentences about a cow. The pupils present such sentences as: "The cow gives milk;" "The cow has horns;" "The cow is red;" "The cow eats grass." The teacher writes these on the board one by one. Then she and the class rearrange the sentences in their natural order; finally the pupils copy the revised work, writing all the sentences in one paragraph.

Pupils should be taught the use of capital letters at beginning of sentences and lines of poetry; in the pronoun *I*; in proper nouns, days of week, names of months. The following marks of punctuation should be taught: period and question mark at ends of sentences; period after initials and common abbreviations; apostrophe in possessive case; comma in series and after names of persons addressed. Observe the use of these marks in the readers.

Have the children start a composition book in which they copy their finished work. Have plenty of seat work in writing, basing all work on interesting subjects.

THIRD GRADE.

A definite language period should now be assigned, but the incidental work in language should be continued. The teacher should outline her work for this class at least a week ahead, for she must direct the children orally and keep them working steadily at some definite aim.

The work should still be largely oral. Continue the reproduction of stories, poems, etc. Children should be asked to tell the other children about books they have read, sketching the story and giving brief character descriptions at the suggestion of the teacher.

So called "oral composition" work should be started in this grade. The teacher should assign easy subjects to the pupils such as: "How to plant corn;" "What I saw in the blacksmith's shop;" "A fishing trip"—subjects drawn, in general, from the actual experience of the pupils. The pupils prepare talks of two minutes or more on these topics, then speak to the class. Teacher and class criticize sympathetically on whether the subject was clearly presented, whether the points were arranged in the best order, whether the pupil spoke distinctly and used correct English.

Original stories based on pictures should be told. Occasionally part of the story may be told by the teacher and the pupils be asked to complete it. Pupils in this grade should be taught in their literature lesson to study the arrangement of incidents in such a way as to lead up to the important point, and should be encouraged to use this method in their own stories. Imaginative stories, such as fairy stories, Santa Claus stories, etc., stories in which the children impersonate some animal or object are good for this grade. Dramatization should be continued.

In all this oral work the teacher should try to build up the children's vocabulary and power to discriminate between words, and should break up slovenly habits of speech and enunciation. Care must be taken also that the children do not form the habit of using too many short, disconnected sentences, or long sentences the clauses of which are joined by "and." However, the teacher must take heed lest she destroy the pupils' naturalness and expressiveness and make them too conscious. Close watch should be kept on the children's language, and kindly, patient criticisms given whenever needed.

The written work of this year should be of two kinds: paragraphs, and letters.

Toward the beginning of the year pupils should be taught to write brief paragraphs on simple topics, such as those assigned for oral com-

positions. The teacher should assign the topics and discuss them with the pupils, showing them definitely how to plan and arrange their material. Pupils should write their paragraphs in school with pencil and the next day should read their paragraphs. Teacher and class should discuss the clearness and correctness, the expressiveness and naturalness, the unity and coherence of the composition. As much time as possible should be spent in this discussion. Pupils should then copy the paragraphs with pen and ink in their permanent composition book. Continue this work throughout the year. The teacher must always assist in the preparation and discussion of the paragraphs, but should gradually put the work more and more upon the pupils. The topics should be stories and explanations, with an occasional description, and should always be drawn from the children's life or reading. Study the paragraphs in reading and literature lessons.

Letter writing should be studied this year. Have the children write letters of one paragraph to friends and relatives, telling them of interesting happenings of current interest. Whenever possible, have these letters copied after discussion and mailed to the persons addressed. Insist on neatness, legibility, naturalness, etc. Occasionally read a model letter, that the children may learn to catch the spirit of the letter. (An excellent book for this purpose is "Letters to Children Written by Famous People." Hinds & Noble, New York. This book can be used in the third, fourth and fifth grades.)

The following letter is poor. It lacks unity because it takes up too many subjects; and it lacks coherence because the sentences are disconnected.

"Dear Grandpa: We played in the snow yesterday. Papa took me to town Saturday. We get lots of milk now. I like to go to school. Our telephone was broken down, but it is fixed up now. How is grandma? We are all well. This is my first letter.

Your loving,
Susie."

The following letter is much better:

"Dear Grandpa: We have been having good times this week. There was a big snow and we all played games like fox and geese, snow ball and building snow men. Papa brought us to school yes-

terday on our sled. I tell you old Frank and Jerry had to pull hard up Creek Hill, for the snow was awful deep.

Don't you think this is a good letter for the first one?

Your grandson,
William."

In learning to write paragraphs children must learn certain forms. They must learn: to indent the first line of the paragraph and close the paragraph wherever the last line happens to fall; to divide the word between syllables at the end of the line; to leave a wide margin at the left of the sheet. In writing letters the pupils should be taught the conventional usages; where to place the address of the writer and the date, how to address the correspondent, how and where to write the complimentary close and the signature, how to address the envelope.

In all the written work insist on correct spelling and correct grammatical usage. Teach punctuation: the dash, hyphen, apostrophe, quotation marks. Teach simple abbreviations: "Mr.," "Mrs.," "Rev.," "W. Va.," "St.," "P. S." Teach simple contractions: "don't," "doesn't," "isn't," "wasn't," "hasn't," "can't" "it's," "I'm," etc.

Have some writing every day during this year. Occasionally assign written work in connection with nature study, arithmetic, literature; and insist that all written work be done neatly, accurately, and legibly.

FOURTH GRADE.

This year for the first time the pupils use a text. Book One of "Modern English" is divided into three parts. The fourth grade work should complete Part One to lesson 62 and Part Two to lesson 124. The lessons in Part Two should be scattered along through the year, thus providing sufficient exercises in letter writing. Do not attempt to take the lessons in their order. So arrange them that the oral and the written work will be mingled in the proper proportions. "A little writing every day and not too much any day," is the ideal.

Pupils that have been trained according to the directions given for the first three years will find much of the text-book work of the fourth year a good review of facts already learned. Such pupils should be given much supplementary work. In fact, the teacher must consider the language book merely as a guide and must constantly bring into the language lesson work from other subjects, and from the interests

and activities of the children. Language cannot be taught from any book; and the teacher that confines herself to the exercises in the book will fail to give adequate and interesting training in language.

The untrained teacher should not omit many of the lessons from the book. Even though the lessons seem disconnected with language work, they are excellent to start discussions and get the children to thinking and talking; and that is the basis of language work. The teacher should be very careful, however, to make the lessons alive with interest. She should never assign a lesson by saying merely: "Take the next lesson." She must introduce the topic in such a way that the pupils will be able to see the point in the lesson, to know what they are expected to do. For example, in assigning the poem in lesson 38, it would be well to introduce the theme by talking of how John and William differ in talents, how a horse's work differs from a cow's, how a tree's value differs from a fence's. Then bring up the lesson by asking how a mountain and squirrel differ in talents and tell the children that they are now about to study a lesson that tells how a little squirrel proved that he had talents as distinctive as those of a big mountain.

The lessons contain directions for the children; but they cannot follow these directions without assistance. For example, in lesson 43 the pupils need some help in learning the story from the outline given. The teacher must not confine herself to the directions and questions provided in the book; she must add suggestions of her own based on her knowledge of the pupils' experience. Do not let the lessons be merely book study.

Whether the suggestions are drawn from the book or not, the oral composition work of the third grade should be continued. The pupils may now make notes from which to speak. The topics should be practical, definite and vital. Have children report stories and make oral reports on the books read.

The lessons in part one provide much writing and the exercises in letter writing in part two provide much more; but at least once a week the pupils should be required to write a composition of two or more paragraphs on some interesting topic. Most of these should be taken from life, such as: "A Trip to the Fair," "How to Make a Sled," "My Grandfather's Home." Some of them may be imaginative subjects, such as "The Autobiography of a Penny," "A Trip to the Moon," "What the School Bell Saw." If the teacher can secure inexpensive pictures, it is a good plan to have the children paste them

in their composition books and write descriptions and stories about them.

During this year the children should be taught to construct simple outlines before they begin to write. For example, if they are to write about "Our Farm," they should make out an outline somewhat like this:

Location and Size—location of orchard, meadows, streams, buildings.

What we raise.

Each division of the outline should represent one paragraph in the composition. If the pupils do not make an outline before they begin to write, they will not plan the work logically and definitely, will leave out important points and bring in unimportant ones. In criticizing this work the teacher should be judicious and sympathetic, calling attention to the grossest errors, but at the same time encouraging the children to express themselves easily and freely. It is a good plan to criticize only one type of error in each group of compositions. Show the children how to criticize their own work.

Continue the work in the writing of single paragraphs. These have much of the educative value of the long composition and are more convenient as units of writing. In this grade begin to train the pupils in the use of the "topic sentence"; the sentence placed near the beginning of the paragraph, which tells or suggests the substance of the whole paragraph.

Pupils should be encouraged to consult the dictionary to look up the spelling, pronunciation and meaning of words. The teacher must show the children how to find words, to interpret the abbreviations, etc. It would be well to have the children purchase a small dictionary for their own use. Webster's Common School Dictionary (American Book Co., Cincinnati) is perhaps the best for grade work.

Insist on correct spelling in all written work. Review the rules of punctuation already given, and teach the simple rules for use of comma, semicolon, colon, exclamation mark, etc.

Take advantage of every opportunity in every lesson to teach spoken and written English. In the arithmetic lesson, for example, teach neatness of writing and arrangement, clearness and correctness of language, etc. In literature study the use of words and help the pupils to add words to their speaking and writing vocabulary; study the construction of sentences and point out that John's sentences are too long and Henry's too short as compared with what they are reading; study the paragraphing to see how authors organize

and unify their paragraphs and connect them with each other. Encourage informal arguments concerning lessons in literature, history etc.

FIFTH GRADE.

During this grade the first and second parts of book one should be completed, the lessons from Part Two being scattered throughout the term, as in the fourth grade.

Supplement the book study with much supplementary work. In assigning and studying the lessons in the book be sure to arouse thought and intelligent expression. (See suggestions in fourth grade.)

Continue oral and written compositions. Encourage the children to introduce fun and humor into their stories. Continue the work in writing single paragraphs with topic sentences, and longer compositions of three or more paragraphs, with outlines, written once a week. Have pupils criticize each others' language. Emphasize the simple grammatical rules in the book and show the pupils that they must follow these rules in speaking and writing.

In this grade children may start keeping diaries. The teacher should help them for a week or two and show them what they should record each day, then should encourage them to continue the work. From time to time the teacher should ask about the diaries and give suggestions.

Occasionally the pupils should be asked to take notes on something the teacher reads, or on the talks given by visitors. The teacher and class should criticize these notes from the standpoint of fullness, clearness, accuracy, etc. Some days after the notes have been taken, let the pupils expand them and reproduce the original.

Simple and informal debating should now be introduced. The questions should arise naturally from the lessons; in agriculture. "Is this community best adapted to fruit raising or cattle raising?" in history "Did Washington do more for his country than Lincoln?" in literature. "Should the Pied Piper have taken the children out of Hamelin?" Questions arising in school may be debated. For example, "Should you snow-ball a boy that does not want to snow-ball?" (Connect with lesson 98, page 83.) Have these debates in connection with the recitations in the different subjects. Let each pupil choose one side or the other and set forth his opinions briefly and forcibly. The teacher should preside and should insist on pupils sticking to the subject, showing courtesy to an opponent, and obeying

parliamentary laws; and she should occasionally throw in a thought-producing question.

Continue the dictionary work. However, do not send the children to the dictionary unless it is necessary. In the literature lesson, for example, it is much better to discover the meaning of the word, whenever possible, by examining the whole sentence and seeing the significance of the word in the sentence. For instance, in lesson 95, have the children infer the meaning of "mock" in the third sentence. The dictionary would not help much here for it would give some word like "sham", which is equally unfamiliar. The teacher should not insist on the pupil's being able to give a dictionary definition; if they know what the word means, can give a synonym for it, or can use it in an intelligent sentence, they know the word well enough.

Encourage pupils to enlarge and enrich their speaking and writing vocabularies by observing and using good words they meet in their reading. But the teacher must be sensible in this matter. She should not urge the pupils to acquire bookish, unusual words, but colloquial, suggestive, usable words. To preserve the child's naturalness and vigor and at the same time refine, correct, and enrich his language is difficult; but the teacher must undertake no less a task.

SIXTH GRADE.

Complete Part Three of the first book in this year. A good deal of practical grammar is scattered through these lessons. See to it that the children learn these rules, and, more important yet, that they observe them in their speaking and writing. Rearrange the exercises and lessons whenever necessary, so that the oral and written work alternate and combine well. Spend some time in assigning each lesson, in order that the pupils may save some time in studying.

Continue the work in oral composition, paragraph-writing, and writing of whole compositions. In all written work, except friendly letters, outlines should be required. These outlines should not be very complex but they should be definite. It is a good plan to assign and discuss the topic one day, have the outline written and discussed the next day, and the composition written the following day. Insist that the pupils plan all written work carefully before beginning to write. They should know the number of paragraphs, the order in which they are to come, and the subject matter of each, before they start writing. After they have prepared the outline,

encourage them to write freely and naturally. Whenever absolutely necessary, they may change the outline as they are writing their composition, but they should always be called upon to give the reason for the change.

Continue the writing of letters. Arrange a correspondence between the pupils of your school and those of a school in some other part of the state. Have imaginary letters written by travelers in foreign lands, or by famous persons in history to their families, or by a dog to its absent master. In case the school is ordering any books or supplies, or any pupil has occasion to write a business letter, make it a class exercise and send the best letter written.

In this grade the teacher should begin to criticize the written work more closely. Mistakes should be indicated by symbols ("Sp" for misspelled word; "Cap" for using a small letter instead of a capital letter; "Sl" for using a capital letter instead of a small letter, etc.) Criticisms may be made in red ink. In order to make sure that the pupils study the criticisms, use the following plan: have the children write on only one side of the page in their composition books, leaving a wide margin at the left of the page. Make your criticisms in this margin. Then when you hand the book back, have the children write the correct forms just opposite the incorrect forms, not rewriting the entire sentences, but only that part involved in the error. It is not a good plan to have the children rewrite the whole composition, except in case of extreme carelessness.

During this year the children should write brief newspaper articles on the school activities. If, for example, you have had an entertainment in the room or school, conduct afterwards a class exercise in which the teacher and the class discuss what should be written, number of paragraphs, etc.; then have each child write an account of the entertainment. Let them vote on the best article as another class exercise, indicating its good points and suggesting improvements. Then have the writer copy his article and send it to a local or county newspaper.

Continue work in dramatization. Study a story or poem in the literature class; then have the children write out the dramatization, supplying stage directions and conversation. Then have the story acted according to the best dramatization.

Continue the work in debating. Assign questions that lie within the experience and reading of the children. Have the pupils make outlines of what they are going to say and speak from these outlines.

Do this in connection with the subject out of which the question arises.

Encourage the children to take pride in their spoken and written language. Encourage them to criticize each other sympathetically and with the desire to help improve each other. *Teach language all the time.*

SEVENTH GRADE.

Part One of the second book of "Modern English" and Part Three over to lesson 16 should be completed this year. Alternate the lessons in Part Three with those of Part One, so that the work in composition is scattered throughout the year.

Part One consists almost entirely of work in grammar. It is a waste of time to attempt to teach pupils all the grammar in these lessons. It is much better to have a plan somewhat like this: Mondays, whole compositions; Tuesdays and Thursdays, text-book grammar; Wednesdays, oral composition work; Fridays, paragraphs, letters, debates, dramatization, etc.

In order to cover Part One it will be necessary to omit many sections of the book. This should be done, since many of them deal with minute grammatical details that are of little or no value in teaching the children to speak and write. Some of the material that may be omitted is: Ex. 7; Exs. 14, 15, 30; Chaps 19, 20, 21; Exs. 40, 41; Pars. 89, 90; Ex. 51; Chaps. 29, 31, 32; Ex. 66; Chap. 35; Exs. 72, 75, 80; Chaps. 41, 42; Exs. 91, 93, 94, 97, 100, 101; Pars. 153, 157, 163, 181; Ex. 103; Chap. 54.

Much more may easily be omitted; and the long and tiresome exercises should be greatly shortened. The teacher should test all grammatical material by examining it to see if it assists in training pupils in practical, intelligent speaking and writing; any material that does not meet this test should be rigidly excluded. In some places the teacher will have to bridge the gap left by the omitted lessons, but this can easily be done. Leave out all the elaborate and complex machinery of grammar and teach only the barest essentials. Teach these plainly and follow them up in the language of the pupils.

Continue the oral work and writing of the previous grades. Make use of Part Three as suggested above. Emphasize during this year the construction of sentences. They should be neither too long nor too short; an average of from fifteen to thirty words is desirable, though some sentences will be longer and others somewhat shorter. Train in mixing declarative, interrogative, exclamatory, and imperative sen-

tences. Train in writing complex sentences; children usually express themselves too frequently in simple and compound sentences. See to it that the sentences have clearness, force, unity, coherence and variety. Work of this kind must be done patiently and prudently, so that the children may retain their naturalness while attaining other desirable qualities. Study sentences in the literature lesson and help the pupils to model their sentences after the easy-flowing, well constructed sentences they find in the prose of good authors.

Review and apply constantly the facts and rules of punctuation. Continue the dictionary work. The pupils should now consult the large dictionary and should be trained to look not only for the meaning and spelling but for the way in which the word is used, synonyms, etc. Send the pupils to the dictionary to settle practical questions of language. For example, a child has used this sentence: "We attended the social." Raise the question as to whether "social" is the correct word and ask the pupils to find out. If you can get a child to consult the dictionary once a day, you have put him on the road to a good education.

If the diary work started in the fifth grade has not been kept up, it may be started again this year. Pupils should always be encouraged to keep account books of the money received and spent by them. Continue the writing of articles for newspapers. In country schools, send a weekly letter to a county paper. Have the children gather the items and write them out and arrange them as a class exercise.

Continue close, but kindly criticism of language, both spoken and written. Encourage the pupils to help each other. It is a good plan to group students in pairs, the two to work together in preparation, writing, and revision of compositions. Occasionally keep a composition a week or two, then hand it back to the writer for his own criticisms.

A literary society should be organized this year for seventh and eighth grade pupils. Meetings should be held in the evening, if possible; and the children should elect their own officers. The teacher should serve as critic. The program should consist of music, the reading of good literature, reproductions of interesting stories and an occasional dramatization, articles on the various activities of the school, a school paper of jokes, news items, and, whenever possible, a debate. Nothing will give more encouragement to English work than a literary society.

If a society cannot be organized, the school should at least issue a weekly paper. It should be made up of the best composition work of the week, of special articles, of jokes, items, advertisements, etc. Perhaps some pupil will copy the paper on his typewriter, or perhaps a mimeograph copy can be made.

It is well to have a bulletin board upon which to post notices, programs, etc. The teacher should carefully watch the language used and criticize it as occasion offers.

A verse-making class may interest some of the pupils. It may be held at noon or after school. It is best not to take any of the regular time of the school for this work.

During this year assign much written and oral work that gives the pupils an audience or interested readers.

EIGHTH GRADE.

The second book of the "Modern English" series should be completed this year. As in the seventh grade, scatter the exercises in Part Three throughout the year. Limit the grammar study to two days a week, following the plan used in the seventh grade.

Cut down the technical grammar to the minimun. The following may be omitted: Chaps. 54, 55, 56, 59, 60; Ex. 133; Par. 240; Chaps. 66, 76; Exs. 147, 148; Chaps. 81 to 86; Chaps. 91 to 95; Chaps 98 to 100; Chaps. 102 to 104; Chap. 114; Chap. 120 to 124; Chap. 126; Chaps. 128 to 130; Par. 487; Exs. 236, 237; Chaps. 136 to 138; Ex. 253; Chap. 142; Chaps. 144 to 145; Chap. 148. Omit all other chapters and sections that do not have direct connection with speaking and writing. Condense long exercises and make all grammar work practical.

Continue the oral composition work and the writing of paragraphs and compositions. Train the pupils to consult encyclopedias and reference books to get material. Train them to organize material, make notes and outlines, and speak and write clearly, confidently, and intelligently. Assign subjects that lead to thinking but that are within the children's ability.

Continue the literary society work and everything else that leads the children to express themselves before an audience or for readers. Continue letter writing. Remember that after they leave school, about the only writing the children are called upon to do is the writing of letters; therefore make sure that before they leave school they can write chatty, interesting friendly letters, and straight-forward, clear, accurate business letters.

Review and practice all the formal elements: punctuation, spelling, paragraphing, etc. In all the classes and throughout the day keep watch on the children's language, endeavoring to break up all bad habits of speech and especially to arouse in the children a desire to speak well. Teach the children to imitate intelligently the good qualities in the literature they read. You do not want to make authors of your children, but you should train them to borrow from the writing of authors those qualities that will make their own work better.

WRITING

GENERAL DISCUSSION.

The teacher should realize that writing is a subject of great importance. It should receive a prominent place, and a due amount of time both on the daily program, and in the teacher's thought and preparation.

1. There are many teachers who are already skillful and successful teachers of writing. It is not expected or intended that such teachers should throw away the plans and systems that they have been using and follow the principles, methods, and devices herein suggested. Some good teachers can get help from a study and application of this course in writing; but it is devised especially for those who have not yet become successful.

2. In any study of writing there are two distinct phases or things to be considered, and it will greatly help clearness in studying and discussing the subject if these are given different names. *First,* there is the act or process, the set of motions we go through: *Second,* there is the result of these movements, or the product. In this discussion, therefore, bear in mind the following definitions:

By *PENMANSHIP* we mean the process or art of writing:

By *HANDWRITING* we mean the product that results from the process.

Qualities of Good Handwriting.

1. *Legibility.*. The first quality of any handwriting is that it can be read. Some of the things that affect legibility are these:

a. *Good Forms:* The letters should follow good forms. Some forms are naturally more easily read than others.

b. *Accepted Forms:* The letters should follow accepted forms. Naturally we can more easily read forms we are accustomed to. Moreover, no teacher has a right to teach new and unusual forms of the English letters. Since English is so nearly a world language, it is highly important that the forms of the letters should be fixed and permanent so as to be recognized all over the world.

c. *Connections and Spacing* should be properly made.

d. *The slant* should not be over 70°. It has been proven that the more nearly vertical the writing is the more easily read it is.

2. *Uniformity and Regularity.* All letters are made of a few single elements, such as straight lines, curves, etc. If these elements are always made the same, with reference to position, length, slant, form, connections etc., the result will be uniform and regular handwriting. Besides the appearance, there are other reasons why a uniform handwriting is desirable, such as ambiguities in legal documents.

3. *Beauty.* Beauty is its own reward. Handwriting should possess this quality. The qualities mentioned above contribute somewhat to it, but beautiful forms when seen, should be imitated and beautiful ideas of letters built up in the mind of the child.

Qualities of Penmanship.

Some of the qualities at which the teacher should aim, in order of their importance, are as follows:

1. *Ease.* It ought to be easy for any one to write. Correct position, correct movement, correct habits as to slant, height, spacing, connections, etc., with proper forms in the mind, will result in easy writing. A forearm movement seems generally acknowledged to be the easiest movement; and a slant of about 70 degrees seems to be the easiest slant.

2. *Speed.* For obvious reasons any one ought to be able to write with a fair degree of speed. Practice, properly carried out, is the only road to speed.

3. *Pleasure.* It ought to be a pleasure to write, or at least not unpleasant. Many a man has lost much, in a business way, because writing was disagreeable to him. If writing is distasteful it encourages procrastination and delay in business matters.

4. *Automatism* is writing automatically and without thought. The ultimate end as to penmanship, ought to be that the student will become so skillful that he writes without thought, so far as the mere writing is concerned, and is free to give all his mental effort to the ideas he is trying to express.

Aim of the School.

What is then the definite aim of the school? It is to teach the child to write a legible, uniform and beautiful handwriting, to write with pleasure, and with such ease and speed that he will finally write automatically.

Aim of the Teacher.

What is the aim of the teacher? It is to understand the general problem of what good penmanship and good handwriting means, and to know each day what thing must be done that day to assist the child to gain the small bit of power and skill which will gradually enable him to reach the proficiency at which the school aims.

Practice.

Aristotle said: "We learn to do by doing that which we wish to do when we have learned it; we become builders by building, and harpers by harping. So, by doing just acts we become just, and by doing acts of temperance and courage we become temperate and courageous." If we learn to do by doing it is evident that the first duty of the teacher is to have the child to do, which is, in this case, to write. Practice must not be neglected.

But many who build are not good builders, and many who play the harp are not good harpers. So there must be some things connected with practice that should be considered.

Physical Conditions of Right Practice.

a. The general law of physical development is that the larger and more general muscles come under control of the will earlier in life than the smaller and finer muscles. For instance, the larger muscles of the arm can be controlled long before the muscles of the fingers. This seems to indicate that the smaller children should use larger forms in handwriting, larger things to write with, and freer movements of larger muscles.

b. When we consider that the whole body must be kept steady for good penmanship, so that many body muscles are concerned besides those of the arm and fingers, we see that a very large number of muscles are in use in writing, the number being estimated as high as five hundred. For these and other reasons the writing period should never come when the person is physically fatigued, or excited, or when muscular control is in any way affected. Just after recess, or late in the day is not a good time for the writing period. Temperature conditions ought also to be good for these markedly affect muscular control.

c. The copy should be near the child. For that reason when the child is writing on his desk, a copy on a slip of paper on the desk is better than a blackboard copy. It is also better for other reasons. Blackboard writing itself is a useful exercise, and the best copy for it is blackboard copy.

Laws of Habit Affecting Practice.

When several movements have to be performed in harmony with one another we call them co-ordinated movements. Writing is a good example of such a set of movements. The general law of skill in co-ordinated movements is that ease and accuracy or rapidity and accuracy, in the performance of a set of such movements, result in proportion to the number of repetitions *under right conditions.* In the main these conditions are as follows:

a. *Ideal Forms.* The mind should have a clear idea or ideal of the proper form. Unless this is true, the efforts have no guidance and amount to nothing.

b. *Close Attention.* The repetitions should be made with strong attention. Practice when the attention is not strongly fixed amounts to little. So there should be nothing to distract the attention at the writing period.

c. *Proper Intervals of Time.* The repetition should be made at proper intervals. The effect of practice seems to "set" in the mind after the practice is stopped. Fifteen minutes practice for four days each will probably result in much more progress than sixty consecutive minutes one day.

d. *A Pleasurable Exercise.* The repetitions should be accompanied with pleasure. We easily learn to do what we like to do. Therefore, the teacher should take pains that the writing period is an enjoyable time.

e. *Correct Movements.* The repetitions should be rightly gone through with each time. It is only the correct actions or movements that count. The incorrect action is not only a loss of time, but it is also setting up a wrong habit which more time will be needed to overcome.

f. *Uniform Speed.* In general, within reasonable limits, speed and accuracy develop together. At a fair speed, work is likely to be more accurate; at a very low or very high speed, work is likely to be less accurate.

g. *Patience.* The teacher should especially note this principle, for often it will save him from discouragement. Speed and accuracy and skill do not develop regularly, even with regular practice. There are periods of increased and decreased progress, and periods in which practically no progress is observable, although it is doubtless taking place.

The Stages of Skill in Penmanship.

Three distinct and well marked stages may be noted in learning to write. The teacher should have these clearly in mind.

a. *Printing Stage.* What may be called the stage of printing, when the whole movement is guided by the eye, and practically the whole attention is taken in controlling the movement.

b. *Eye Directed Stage.* The second stage, when the writing is mostly guided by the muscle sense, and the eye is not much used for the formation of the letters, but merely for general supervision of the movement, to keep the writing straight on the line, etc. This is the stage most people reach.

c. *Automatic Stage.* The automatic stage, when the writing is entirely unconscious and automatic, the entire thought being given to composition of the matter written.

Generalization.

In the first two or three grades the teacher is concerned with the first of these stages; in the intermediate grades, with the second; and in the upper grades, with the last. The child's writing outside of the practice time should contribute a great deal towards his reaching the final stage. Therefore, all written work should receive the teacher's special attention. It should be given with the request that it be written according to conditions given for regular writing practice, and not so much written work should be given as would make the child neglect these conditions in his haste to get it done.

The Use of the Copy Book.

The copy book should be used as a *writing dictionary.* At a given lesson the pupil should be allowed to copy one line of the copy in the book. The teacher should then point out errors and faults in this copy. The child should next make several copies on other paper, and finally one more copy below the first one for the lesson made in the book. He should then carefully compare this with the first one, to note improvement. If there are still faults, the same process should be repeated. *All practices for correction of faults should be outside the book.* The copy-book is for reference for correct letter forms, just as the dictionary is for reference for correct spelling and pronunciation forms.

Proper Pen-Holding.

In Clark's "Public School Penmanship" the following seven points are given for correct holding of the pen or pencil. The pen should be held between the first and second fingers and the thumb.

1. It should cross the second finger at the corner of the nail.
2. It should cross the first finger close to the middle joint.
3. The thumb should bend outward at its first joint, and the end of it should touch the penholder opposite the first joint of the first finger.
4. The forearm should rest lightly on its muscle, as has been shown in describing the body position.
5. The wrist should be raised slightly above the desk.
6. The hand should rest on the tips of the third and fourth finger nails.
7. The top of the pen-holder should point in a line up the forearm and over the elbow, between the elbow and the shoulder.

How To Teach Proper Pen-Holding.

These seven points should be taught *one at a time,* but not necessarily in the order given. They should be taught in the order of their importance. Proper exercises should be given to assist in the detailed development of the study.

The upright position of the hand is of first importance. Sometimes it is well to put a long thin stick, such as a ruler, into the pupil's hand in the same position as a pen-holder should be, and show him that this should extend directly over the shoulder. Then have him lift his arm vertically over the elbow, till the ruler comes directly and vertically over the shoulder. Have him repeat this exercise briskly for ten or fifteen seconds.

Have the child place the hand at the left edge of the paper, move it half way across the page, meanwhile paying full attention to the position of the hand—not the sheet—then lift his hand on the elbow in exactly the position it was, and then if the pen does not point directly over the shoulder it shows that the hand has rolled over out of position while he wrote the line.

Next in order of importance is the third and fourth finger nail rest. Have the pupil put his hand flat on the desk, close all of the fingers so that all of the four finger nails rest on the desk, then extend the first and second fingers as though holding the pen.

The elevation of the wrist should come next. If when his hand is properly supported on the two finger nails the wrist tends to drop,

have him hold the muscle of the arm properly on the desk and practice raising and dropping the wrist.

For the crossing point of the pen-holder against the second finger nail, ask the pupil to hold his pen correctly between the first finger and the thumb. Then ask him to raise his first finger from the pen-holder, and to notice the slight pressure of the thumb against the corner of the second finger nail.

In order to correct a too curved position of the first finger show that it rests on the pen-holder from the middle joint to the end. If necessary, fasten a small rubber band around the pen-holder and finger, between the first joint and end.

In order to correct undue curvature of the first two fingers and thumb see to it that the pen point is at least three-quarters of an inch below the end of the second finger.

Both pencil and pen-holder are held in the same manner. Give drills one time with the pen-holder, and then with the pencil.

Useful Gymnastic Exercises.

To assist in developing control of the muscles of the hand and arm, try the following:

1st. Place hands palms downward lightly on the desk, arms resting on desk, only fleshy part of arm near the elbow touching or resting on desk. No other part of arm should touch desk, except part near elbow, and the third and fourth fingers which serve as runners or glides when moving from letter to letter or word to word.

2nd. Lift hands high as head.

3rd. Wave hands up and down, as in waving good-by to someone, or move fingers and hands as birds fly.

4th. Bring hands to desk.

5th. Drop hands to side of body—let them hang limp near end of seat. Repeat these arm and hand manipulations briefly each writing period at beginning of year or term, but gradually lessen time given to each. Review whenever necessary. Children like to show how they say good-by to father, mother, or baby, or how the birds fly, by waving their hands. As a rule children naturally and easily show how birds fly. A child waves good-by naturally; handling of pencil or pen should be as natural and will be, when the concept is as clear and interest is as near. Some teachers give signals, thus:

Position (which means feet on floor, hands resting on desk).

Lift hands (which means hands in air about as high as head).

Show how birds fly, or wave good by.
Bring hands down on desk.
Drop hands side of body.

Reasons for Good Position.

It may help the teacher to secure a good seat-work position, if the child himself understands the reason why the teacher insists on it. The child ought certainly to understand that these reasons are for his welfare, and not for some mere whim of the teacher. Three good reasons for proper position in writing are:

a. To preserve the eyesight. A poor position causes bad eyesight.

b. To preserve good health. A bent-over position cramps and restricts the circulation and respiration, which is bound to affect the health adversely.

c. To secure convenience in penmanship. The following suggestions are offered: the teacher should explain these artfully to the children and should see that they have the proper position in all school work.

1. *Position for Seat-Work in Penmanship.* The body should be erect, facing front, with feet flat on floor. Shoulders should be back with head erect. Hold the right arm extended from elbow, and resting on large muscle of forearm. Let left arm rest on the desk to steady the paper, which should lie at a slightly oblique angle with the edge of the desk. It would be well to have a line marked across the desk to show position of paper.

2. *Position for Blackboard Writing.* Teach proper position at the blackboard the first thing. Pupils should stand a little distance away from the board, the line of the body not quite parallel with it. The space of the blackboard written on should have its center directly opposite the right shoulder.

Form and Movement.

These are somewhat related, but the hand-writing of any person, so far as its appearance goes, depends largely upon the forms of the letters which the person has in his mind. His skill as a penman is largely a matter of his muscular control in executing these forms. Thus in a general way we might say that, according to the distinctions made herein: *Form* pertains more to *handwriting* while *movement* pertains to *penmanship.* In actual practice, however, these cannot always be separated.

It will tend to better teaching, however, if the teacher recognizes and provides for these two phases of the question.

Attention ought to be directed towards a good form before any letters either in words or without words, are practiced. Of course, the copy-book gives these forms; however, the teacher should usually at the beginning of the lesson call attention to any special points that are worthy of notice. By the very nature of the mind, the teacher ought to see more in a given copy than the child would, embracing many such points as the connection of letters, the height, slant, amount of curvature of certain parts, etc.

Every copy-book lesson should be preceded by general movement exercises in making ovals, loops, and many such designs. Of course, the lesson itself should be carried on with proper movement in making the copy that constitutes the set exercise for the day.

Permanent Model.

The following suggestion is of first importance. If there is ample blackboard room the teacher should keep a set of model letters on the board for reference. If blackboard space is lacking, a set of these in printed form can be made and tacked upon the wall in a position where the pupils can easily see them. This will serve as a model for correct forms for the children in writing at all times in other work; also, whenever the teacher observes a letter poorly formed, she can call attention to the properly formed letter in the permanent model set, to secure the correction of error.

Grading.

Grading furnishes the child an effective stimulus and motive. The grading of writing, however, has usually been so much a matter of personal opinion that it was not very practicable. The Russell Sage Foundation, however, has worked out a definite scale commonly known as the "Ayres" scale for grading hand-writing, which is perhaps as good a thing as has yet been done along the line of offering a definite basis for such grading. A copy of this scale can be secured from the Russell Sage Foundation, 130 E. 22nd St., New York City, for 5 cents.

Dr. Edward Thorndike has also worked out a scale, copy of which is to be found in "Teaching the Common Branches," by Dr. Charters, which is on the State Reading Circle Course for 1914-15. At the beginning of each term each pupil ought to be given a copy to make, which shall be graded and filed as a record of his hand-writing. At the end of the term, if not every month, this should be repeated, a

copy being given to be written, graded according to the scale, and thus definite ideas formed as to the advancement of the individual pupils.

The Alternation and Combination of Classes in Writing.

In one-room schools the work in writing can be very successfully done with-out having separate classes for each year. It is thought that the following combinations can be easily made:

1st grade with 2nd grade, where 2nd grade is small or not well advanced.

2nd grade with 3rd grade in other cases.

4th grade with 5th grade.

6th, 7th and 8th grades.

Thus a school having all or nearly all grades might not have more than three or four writing classes.

The Pupil's Interest and Enthusiasm.

No success can come to the teacher who does not secure the proper interest and enthusiasm on the pupil's part. The teacher herself should exhibit these qualities, for they are contagious. She should preserve and exhibit written work. When she has a school entertainment or even visitors, written work should be on exhibition. Work that properly exhibits the writing of the child should be taken home by him. Reward pupils who are showing improvement by having a little honor roll on the blackboard. Have pupils themselves compare and select good writing from their class work. Encourage friendly rivalry among pupils. Use the Thorndike or Ayres scale for determining advancement in the quality of hand-writing, and use timed tests in writing a definite numbers of letters or words for improvement in speed. Promise that all who show a certain amount of improvement may have some special privilege, such as writing a valentine on Valentine Day, writing invitations to a school entertainment, writing letters to Santa Claus, etc.

The Left-Handed Child.

The phenomena of right and left-handedness are not throughly well understood at present, although there are various theories on the subject. Therefore we do not really know how much a child's writing with his left hand may be related to all the other factors in his physical and mental make-up. According to our best knowledge at present the teacher should be guided by the following suggestions: In the beginning if a child displays a tend-

ency to write with his left hand the teacher should make a moderate effort to train him to use his right hand instead; however, if there is any marked inability to gain the necessary muscular control, it would perhaps be better to allow him to continue with the left hand. In the case of more advanced pupils, in whom the habit has already become seated, merely try to train them to be good writers with the left hand.

For full discussion of the subject see: Thompson's Psychology and Pedagogy of Handwriting.

Books that are recommend to teachers of writing:

B. D. Berry & Co., Chicago, Ill., have an excellent manual to accompany their systems of copy-books. This takes up the writing by grade, and by illustrations, explanations, exercises, gives thorough exposition of the methods which they recommend for the successful use of the system. They will supply this to county superintendents and teachers free of charge.

Clark's Public School Penmanship, Ginn & Co., New York. This is a good practical book covering practically all of the teaching of penmanship, developing the principles in a way that is applicable to any system.

Thompson's The Psychology of Writing. Warwick & York, Baltimore, Md. This book, while not attempting to give any detailed system, goes deeply into the fundamental principles involved in the psychology and pedagogy of the subject.

Steadman's Teacher's Manual. The American Book Co., Cincinnati, O. This is a practical manual, and while it is especially designed to accompany the author's own system, it has much material and discussions of general value. It contains an outline of 76 graded lessons that would be of use with any system.

FIRST GRADE.

Grade Detail.

1. General: The work of the first year is mostly concerned with teaching the forms of the letters, and getting some start in the movement. The writing is in part very closely connected with the work in reading, for the child has to be taught how to *read* the script forms, as well as how to *make* them. In the first few weeks in one-room schools there will usually not be much time for any writing exercises that are not directly connected with the other lessons.

2. Time: The teacher should devote at least ten minutes per day to the writing of the first year class.

3. Means and Materials: Where the school room has ample blackboard space much of the work of the first lessons can be well, perhaps best, done at the blackboard. This is not only a useful way of beginning the work, but it also supplies small children with the necessary rest and variety in physical posture and position.

Where the work must be done at the seats, the materials will be paper and large pencils.

Paper ruled about 3/4 of an inch, single ruling, is recommended, about 12x9, or 10x8. Cheap printing paper, squares torn from old newspapers may be used for practice.

The following pencils are commended:

Dixon Crucible Co., Philadelphia, beginner's No. 308.

American Lead Pencil Co., New York City, No. 81.

E. Faber, New York City, Elementary No. 6370.

The Eagle Pencil Co., New York City, No. 773, or Alpha No. 245.

Do not use a small, hard leaded pencil.

See if your dealer will not carry these in stock.

No copy need be used this year.

4. General Notes on Method:

a. *The Publisher's Manual.* The B. D. Berry Co., 623 So. Wabash Ave., Chicago, the publishers of the state adopted writing books, have an excellent manual for teachers. This manual will be furnished to teachers, preferably to the county superintendent. It is recommended that teachers secure this manual, as it gives a carefully prepared course of work designed to go with their copy books.

b. *Drill.* The first drill should be on oval o's of large size, the teacher counting, one-two-three, or saying round-and-round-and-round. The child loves rhythm, and the purpose is to secure rhythmical motion. Some appropriate little songs might be used for the same purpose.

Later on small ovals can be used with the larger ones, and can be joined to the letter *n*.

Slanting up and down strokes can be used following this, such as / / / / /, making three or more to some kind of rhythmical counting.

c. *Devices.* Rolling the Hoop. Connected ovals may be made, to a count. Teach the children to press lightly or the hoop will stop rolling.

Jumping the Rope. A similar series of ovals, but inverted, may be made. The children may count with the teacher, jump-jump-jump,

etc., or sing some appropriate little song. Let the accent come on the downward stroke, as if the rope were hitting the ground.

Grapevine Swing. Horizontal curves, back and forth.

The Ticking Clock, or Tick Tock. This is similar to the swinging game, but the horizontal curves do not run over the top of each other, but a little drop is made each time.

The Humming or Buzzing Bees. Light curves, joined by a long loop. This may be made later when the children have gained more freedom and better control of their muscles.

Skating. Oblique up and down strokes, joined by loops at bottom and top.

The Sky Rocket. A set of ovals, growing smaller and converging to a center, ended by an abrupt upward oblique straight stroke.

5. Form: These notes might suggest the idea that the first year's work is mostly a matter of movement, but such is by no means the case. The teacher should constantly try to develop the ideas of form in the pupils.

It is necessarily true that children will vary greatly in the forms they learn and use for letters; but it is thought that it will in general be well for the teacher to use the forms of letters given in the adopted copy books. The teaching of proper forms is mostly a matter of individual work and attention, as each child has a tendency to make his own errors and deviations from proper forms. These should be shown him personally, and the work should be varied individually to suit his case. Clark's Public School Penmanship, pages 71-74, 134-37, gives a good treatment in detail for teaching the script.

6. Supervision of First Grade Writing: It is strongly urged that first grade pupils should be allowed to write only under the supervision of the teacher. Unsupervised writing is the source of many faults which cost a vast amount of effort to overcome.

For seat work, cutting out and pasting pictures, word and sentence building with alphabet or word cards, and many forms of activity may be correlated with other work at this time, and many of these develop manual skill that will in turn contribute directly to the writing.

7. Position: For both board and seat writing the proper positions should be carefully taught before attempting any work. (See General Discussion.)

Order of Teaching Script: Clark's Public School Penmanship

gives a carefully worked out order of teaching the various letters and words for the primary grades. (See books recommended under General Discussion.)

The teacher should endeavor to invent or find some scheme for a procedure in this matter, for the letters should proceed according to some definite plan. There is a natural order which greatly facilitates the child's progress. In general, any particular letter is similar in form to others, and this suggests natural series and groupings.

9. Promotion Standards: At the close of the first year the pupil should be able:

a. To stand properly at board and write on correct slant.

b. To sit properly at desk.

c. To place the paper on his desk properly.

d. To hold the hand upright while writing.

e. To write letters and words with proper movement of forearm.

f. To write legibly on single lined paper.

g. To make script letters a little smaller than he made at the first of the year.

SECOND GRADE.

Grade Detail.

1. Time: The pupils of the second grade should receive at least ten minutes time per day. In some instances this can be taken in conjunction with the work of the first year class, in other cases with the third year class.

2. Means and Materials: The pupils of this grade should use large, soft pencils, and paper during the first part of the year, and do blackboard work during all of it. During the last half of the year they may use the copy book, and pen and ink. Use copy book No. 1.

3. Purpose and Aim: In general these should be as follows:

a. Fixation of proper forms in the mind.

b. The gaining of an increase in free movement through drills on exercises and letter forms.

c. The increase of the child's interest in writing.

4. First Steps: Review various exercises suggested for first grade. Spend at least a month on this. Begin with blackboard exercises, and with unruled paper for seat work. When ruled paper is used, it should be ruled somewhat closer than for first year work. The width shown in the No. 1 copy book is very good.

5. Pen and Ink: If the use of pen and ink is begun here, the

child should be taught several things that are of practical importance.

a. The use of a blotter. Show him how to lay the blotter carefully on the inked paper, to press it gently, and to lift it squarely from the surface, instead of sliding it on or off the paper.

b. To dip the pen carefully into the ink. The pen should be dipped rather slowly into the ink, about to the depth of the top of the "eye," and removed slowly. This will prevent the ink from dropping from the pen. A new pen point has some oil on it to prevent rusting, and this should always be carefully wiped off.

c. The kind of pen-holder to use. It should be large at the base, and tipped with cork, rubber, etc., not metal.

d. To make and use some proper sort of pen-wiper, and to wipe the pen dry when stopping the use of it. Several folds of cloth sewed together at one edge is very satisfactory.

6. Distributing the Work in the Copy Book: When the copy book is begun the teacher should count the number of pages of copy, then plan the work of the year so as to allow the proper number of days for each page. (See General Discussion, on the Use of the Copy Book.)

7. The Penmanship Lesson: Pass and collect materials in a systematic manner, planned so as to economize time. Give the little relaxation drill suggested in the General Discussion. At the beginning of the lesson have all pupils take proper position, under the supervision of the teacher. In exercises be sure to count or in some way indicate the rhythm, so as to keep the proper speed. Use the blackboard to show how to overcome general or class faults; go to each pupil individually to overcome individual faults. Instruct more by *showing* than by *telling*. Strive to arouse enthusiasm by means suggested in General Discussion.

8. Improvement and Promotion Standards: At stated times during the year apply the Ayres or Thorndike scales, for testing improvement in form and legibility of handwriting. In this grade pupils may not advance many steps in the scales, but it gives them a definite end to work towards.

At the close of the year about the following should have been accomplished. The pupil should have acquired:

a. Proper position for writing at board or desk.

b. Knowledge of proper position of paper on desk.

c. The habit of holding pen or pencil properly, involving the upright position of the hand, the third and fourth finger-nail rest, the elevated wrist.

d. More uniformity in his script.
e. Smaller script.
f. Fair use of fore-arm movement.

THIRD GRADE.

Grade Detail.

1. Time: At least ten minutes, preferably twenty, throughout the year. In one-room schools with many grades this grade can be combined with either the second grade or the fourth. (See General Discussion.)

2. Means and Materials: Practice paper, pencil, pen and ink, blackboard. Ruling of paper should be a little closer, and pencils should be soft, but may be smaller than for second grade.

3. Purpose and Aim: Improvement in form, increase in speed and freedom of movement, maintenance of interest and enthusiasm. This year should specialize on the study of the letter forms. (See Clark, pages 31-74, for detailed instruction for teaching script; also pages 134-137.)

4. First Month: Time spent on review and practice exercises on blackboard, and with paper and pencil. See first and second grade detail. Give exercises on blackboard with the class working in unison to teacher's count, and give similar drills on large unruled sheets of paper, reproducing forms and exercises of previous years. Note the words and letters used in the copy book, however, and let these preliminary exercises be directed towards them. Spend some days in practice drill on the various points relating to position at board or seat, and position of paper, etc.

5. The Copy Book: Adopted Book No. 2. Read General Discussion, on use of the copy book. In this year a detailed study of the letters should be emphasized, so that the pupil will build up a definite idea of the proper form. Use the copy book, also the model series (See General Discussion) for this purpose. Count the pages in the copy book, and make some estimate of the number of days you can allow to each page. Begin the use of the book the second month. It would be better not to have pupils bring their pen and ink to school till this time, so that they will be fresh and in good condition for beginning the work. Teach dipping the pen, blotting, wiping pen, etc.

6. The penmanship lesson: See Grade 1, Paragraph 7.

7. Improvement and Promotion Standards: See Paragraph 8. Grade 1. Pupils should during the year show much improvement as

tested by scales, and in timed tests in penmanship. Before promotion the pupils should have acquired the following:

a. The habit of proper position of body, arm, hand, pen and paper.

b. Better script, as to form, size, etc.

c. The habit of applying these things in writing at other than the writing time.

d. More definite knowledge of and ability to compare letter forms.

e. A fairly good use of the forearm movement.

f. Some skill in use of pen and ink.

FOURTH GRADE.

Grade Detail.

1. Time: From ten to twenty minutes. (As much as possible each day throughout the year.) This year's class may be combined with that of some other year.

2. Means and Materials: Copy Book No. 3, otherwise same as last year.

3. Purpose: Continuation of fixation of proper forms. Specialization in improvement in movement.

4. First Month: Review of all points pertaining to position. Exercises and drills with blackboard, pencil and paper, physical movements and drills without anything in hand, etc. Apply carefully Clark's Public School Penmanship, giving a detailed study of movement, forms and development, pages 75-96.

5. The Copy Book: Begin with the second month. Count the number of pages so as to allot the proper amount of time to each lesson. Use about half of the time for movement drills, and half of the time for form work, the latter based on the forms of script found in the copy book. Use the copy book for a *writing dictionary,* in the manner suggested in General Discussion. Although this is the year for giving especial attention to the improvement in movement, the application of this movement to the writing will not all be accomplished this year. This will take several years.

6. Reference: General Discussion, and First Year, Paragraph 7.

7. Improvement and Promotion Standards: Collect specimens several times during the year, to which apply the Thorndike or Ayres scales. Have timed rapidity tests for noting improvement in movement and speed.

8. Promotion Standards: Before promotion the pupil should show improvement in all of the five points mentioned in third year standard. In addition, he should have:

a. A growing knowledge of what is meant by movement, the things that go to make it up, and its uses and advantages.

b. Increased pleasure and pride in his hand-writing and penmanship.

FIFTH GRADE.

Grade Detail.

1. Time: Fifteen to twenty-five minutes per day. The class may be combined with other grades, below or above.

2. Purposes: Improvement in form; growing mastery of movement; the application of movement to form; maintenance and increase in interest and pleasure.

3. First Month: As in fourth year.

4. Copy Book: No. 4, and in long terms another might be completed. See grade 4. Distribute the lessons so that each will receive a fair share of time.

5. General Remarks: This is a highly important year's work in writing, for in many instances it marks about the last year's schooling for the boy or girl. The student should be constantly directed towards proper letter forms, so that the legibility and general appearance of his writing will show the proper progress. In addition to this attention to form, definite exercises designed to further develop movement should be given. Ovals, ellipses, "figure eights," push and pull movements, etc., should be used in regular drills. Then these movements should be applied in the writing of letters and words. Combinations of words requiring special practice, such as b, v or w, with e, b with y, o with o, d, v or s., etc., should receive especial attention. Lateral spacing should receive attention. Many children make each line of a copy shorter, showing that they vary the lateral spacing. Clark's Public School Penmanship gives a very elaborate study on the application of movement to letter forms. The pupil should be constantly encouraged to use his arm movement in all of his writing in other lessons. He should begin to have some power to use the arm movement entirely across the page.

6. Standards: The teacher should apply one of the scales during the year twice or more times, and should give timed tests on writing familiar copy, for speed and accuracy.

In addition to the standards mentioned in grade 4, the pupil should show improvement as to the various points therein mentioned, and should:

a. Understand how all letters are joined.

b. Understand something about lateral spacing.

c. Be able to apply free movement across the whole page.

SIXTH GRADE.

Grade Detail.

1. Time: The class, either alone or in combination with other years, should have a period of 15 to 25 minutes.

2. Writing Period: The writing period should in general consist of three parts, each taking its proper share of the time.

a. Movement exercises.

b. Study of letter forms, spacings, etc.

c. Application of movement to sentence writing.

3. Blackboard Writing: As children in the upper grades use the blackboard more and more they should be taught to write well on the blackboard. Certain lessons should be given to this instead of to seat-writing.

4. Copy Book: At least one copy book should be finished. A second book may be finished, in cases where it seems advisable to do so.

5. Correlation: Writing may be taught effectively by noting the written work connected with the other subjects of the curriculum.

6. Reference: See General Discussion, for the stages of penmanship. The child who has made proper progress should now be entering on the automatic stage of penmanship. Progress here means that the thought should be given more to the subject matter than to the process through which the hand is producing the handwriting. Therefore the teacher should give attention to the writing that is done in connection with the expression of thought in various school activities, and teach the child to apply the general principles he has learned in the writing periods.

Many pupils' writing at about this time actually begins to deteriorate, often due to carelessness and lack of attention from the teacher.

SEVENTH AND EIGHTH GRADES.

Directions.

1. Combine the seventh and eighth grades for instruction and practice in writing.

2. Most of the writing should be correlated with other subjects—particularly with arithmetic, bookkeeping and English, such material as the commercial papers found on pages, 109, 202, 203, 230, 335, 341-2, 354-6, 358, 362-4, 371 and 438 of the Grammar School Arithmetic, will be found particularly adaptable to correlation.

3. The teacher will doubtless be able to teach more by demanding care and neatness in the written work of other subjects than by any instruction she may give at the writing period. Carelessness should not be tolerated in any kind of written work.

SPELLING

GENERAL DISCUSSION.

Aims and Suggestions.

The problem before us is to find out, if possible, the reasons for misspelling and apply more rational methods in teaching this subject.

The world demands two or three times as many words as a pupil can acquire before the compulsory school age expires, and this deficit must be made up by resorting to the dictionary.

Here are a few reasons for misspelling:

1. The teacher attempts too much. She tries to teach too many words in each lesson. The teacher often assigns more than one lesson at a time and then spends little time in testing. The words are not applied by the pupil.

2. The pupil's pronunciation may be different and more prominent than the teacher's. The people in the community may pronounce the word incorrectly. The child has become familiar with this pronunciation and for this reason does not recognize the word when the teacher gives the correct pronunciation.

3. The teacher's *mis*pronunciation.

4. Some pupils read little, hence they lack impressions and stock of word pictures.

5. Physical reasons.
   (a) Indistinct vision.
   (b) Defective hearing.
   (c) Blurred perception.

6. Carelessness.

The following suggestions may prove helpful:

1. Have a definite period for spelling. It is of primary importance.

2. Spelling is mostly an effort of memory rather than that of reason. The teacher should discover which kind of memory predominates in the pupil—the visual type of memory in which the child depends upon sight in fixing the form of the word in his mind; or the auditory—the kind used by the ear-spellers who recall the letters of a

word through association of the sounds represented by the letters; or the motor type of spellers, who learn by writing and re-writing or by saying and re-saying words. Then there is the mixed type where the three are employed in combination.

In the lower grades the motor and auditory types predominate. Here the children should be allowed to move their lips while studying spelling.

3. Assign the lesson the day before. If the pupil is ear-minded, he should study the lesson outside of school hours where he can sound aloud the words of the lesson. The eye-minded can learn the lesson in school.

4. Combine oral and written spelling. Oral spelling should precede written. Oral spelling aids pronunciation and adds to the interest of the spelling lesson.

The object of teaching spelling is to train pupils to spell correctly when writing.

5. Teach pupils how to study the spelling lessons. Do not let them waste time upon the easy words, but drill them upon the words commonly misspelled.

6. Arouse an interest in spelling by:

(a) Spelling matches.
(b) Inter-school contests.
(c) Developing in the pupils the spelling habit.
(d) Frequent drills but not too much repetition.
(e) Varying the methods.

7. Have words used in sentences or have the meaning given before oral or written spelling. Do not require formal definitions, but make sure that the child understands the word by using it in a sentence or by giving its synonym.

8. In writing a lesson have no division into syllables and no diacritical marks. They change the picture of words.

Note: Pupils should be taught never to divide a syllable at the end of a line.

In oral spelling the pupil should pronounce the word before spelling and while spelling separate the word into syllables by pauses.

9. See to it that the word pronounced is understood by the pupil and that it becomes a part of his vocabulary. Ideas before symbols.

10. Teach homonyms in dictation lessons so as to bring out the meaning.

11. The principal diacritical marks with their names and the

sounds they represent should be known by all pupils on completing the fifth grade. Insist on the use of the dictionary above the fourth grade.

12. Don't mispronounce words in order to help the pupil spell them.

13. Emphasize in the upper grades accent marks, root-words, prefixes, suffixes and syllabication.

14. About seven per cent of the time should be given to spelling.

15. Grades I, II, III, should have two unphonetic words daily. Grades IV, V, should have three new words daily. Grade VI should have four new words daily. Grade VII should have five new words daily. Grade VIII should have six new words daily besides the review words.

16. Alternate the seventh and eighth grade spelling.

Steps of the Spelling Lesson.

1. Word viewed by the pupil.

2. Word distinctly pronounced by the teacher if the pupil cannot pronounce it.

3. Word then pronounced by the pupil.

4. Word next used in a sentence by the pupil.

5. Study of words by the pupil, assisted in the lower grades by the teacher.

6. Oral spelling by the consecutive and promiscuous methods.

7. Written spelling in column. Contextual spelling once a week, that is, using the word in sentences or spelling from dictated sentences.

8. Papers collected and corrected by the teacher.

9. Pupils notified of misspelled words by number of word or dictated sentence, the pupils who have misspelled being required to spell these words to teacher in written form.

10. Review frequently.

Note: Co-ordinate writing and spelling and have spelling words for writing exercises. Teach spelling in connection with composition. Here is a good place to form the spelling habit.

Spelling by Grades.

Spelling has already been provided for in this course of study in grades I, II and III, in connection with the subject of reading. Word lists are to be compiled from the reader and given as special exercises.

THIRD GRADE.

Section I of the Champion Speller may be used. Word lists are to be compiled from the reader and made a special exercise.

FOURTH GRADE.

Champion Speller, Section II. The text should be supplemented with word lists made from the work connected with other subjects.

See suggestions and steps of the spelling lesson.

FIFTH GRADE.

Champion Spelling Book, Section III. The dictionary should be used as a reference work for pronunciation and meaning.

A thorough review of the elementary sounds and diacritical marks should be made.

Teach the pupils how to use the dictionary. Show them that the words are alphabetically arranged.

Drill them in turning quickly to the word wanted. Have dictionary races to acquire speed. Show them how to make a choice of the different meanings of the word. The dictionary should be in constant use in language work. Cultivate the dictionary habit.

SIXTH GRADE.

Champion Speller, Section IV.

Spend little time in having rules for spelling committed to memory, and then only one rule at a time. Word building and word analysis may be emphasized. The meaning of words should receive attention.

See suggestions on spelling and reasons for poor spelling.

SEVENTH GRADE.

Champion Speller, Section V.

Emphasize accent marks, root-words, prefixes, suffixes and syllabication.

Any misspelled word should be given until its spelling is learned by all pupils. Exceptions are to be made where the pupil is a chronic misspeller.

EIGHTH GRADE.

Champion Speller, Section VI.

Cultivate the habit of accurate spelling in all written work. The pupil should be sure that the words in a written exercise are spelled correctly before it is handed to the teacher.

Drill upon topical lists of words, Latin and Greek roots, prefixes and suffixes, definitions of words and the proper use of the dictionary.

See suggestions on spelling and reasons for poor spelling.

ARITHMETIC

GENERAL DISCUSSION.

1. The Course: The course of study in Arithmetic consists of two parts: (a) the general discussion; (b) the grade detail given under the headings of the various grades. No teacher can know the course properly without knowing both parts.

2. Extent of the Course: Arithmetic is to begin in the first grade and to continue throughout the eight grades, although the method is varied to suit the nature and powers of the child's mind at different ages.

3. Method in Primary Grades: The work in the first grade is largely oral and part of it incidental. This does not mean that it is to be done at random or by accident, but it means that it is closely related to, and grows out of, other lessons in school and other activities in the child's life, in school and out of it. It should be carefully planned by the teacher, and the teacher should have definite ideas of what is to be done; but there will not be, usually, formal recitations of such type as older pupils have.

4. The Duty of the Schools: The general public expects the child to get from his arithmetical training the following results:

a. A certain number of arithmetical facts.

b. The power to handle these facts with *accuracy* and *speed.*

c. The ability to reason in mathematical terms; that is, to use arithmetical facts in the solution of the problems that arise in business and professional life which involve numerical relations. It is the duty of the school to ascertain the nature and extent of these demands and to satisfy them with as little waste as possible.

5. The Teacher's Aim: The teacher is concerned, therefore, with four immediate ends, and should have them clearly and constantly in mind.

a. The Number, Content or Facts that the child should acquire. This includes the ordinary number, relations of addition, subtraction, multiplication, etc.; the processes in which they are used; some facts and relations that are often found in arithmetic, such as tables used in measurements; principles used in mensuration of plane and solid figures, as, for example, the value of pi; facts relating to customs

and practices in business life outside the school. In general the text book is expected to furnish the guide to these things, although the teacher ought always to have some discretion as to omissions and additions. The general principle that should guide the teacher is that arithmetical facts *in school* are valuable in proportion to the amount of use they will have later *out of school.*

b. Accuracy in Using, Handling and Applying These Facts: This is secured only by requiring pupils to obtain correct results from the beginning and throughout the course, not even the slightest errors being tolerated. Pupils should be taught consciously to test results by asking themselves whether a given result seems reasonable or not; for instance, if a pupil should compute that five bushels of potatoes at 80c a bushel cost $40.00, he should ask himself whether such a quantity of potatoes ever cost so much, which most children know to be unreasonable. This would lead to a revision of the work, with probable discovery of the source of error. Wherever possible, definite proofs should be applied, as the subtraction test for addition, multiplication test for division, etc. What might be called the approximate or round number test is often valuable. For example, if I have multiplied 697 x 18, since 697 is less than 700 and 18 is less than 20, I might multiply 20 x 700 mentally, giving 1400. Therefore my answer should be less than 1400. If it is greater, then it is certainly wrong, and the operation should be gone through with again.

c. Rapidity in the Use and Application of These Facts: Speed is secured only by many repetitions under right conditions. These conditions imply that practice should come at proper intervals of time and for periods of suitable length. It should occur when the child is not fatigued or physically unfit, when he feels an interest in the matter, and when he can give close attention. Much of the early work of the school has rapidity in the simple fundamental operations as its chief aim. The teacher should constantly strive to supply interest for drill and practice work, by varying the methods, materials, etc., by using contests, games, etc., and by adapting the work to the instincts of the child.

d. Neatness: The teacher should insist on neatness in all written work. She should recognize clearly the elements that constitute this quality, for they are simple and few. For instance, the paper should be unsoiled, and the pupil's hands should be clean in order to keep it so. Pupils should be taught plain and simple forms of figures, and make them regular and uniform as to size, shape, etc. Plus and minus and other operation symbols should be carefully and regularly

spaced, not too close nor too far apart. They should run straight across the page, parallel with the top. Columns of figures should be absolutely vertical and parallel with the sides of the page. Lines used in addition, division, etc., if intended to be straight, should be absolutely so. The bottom, top, and side margins of the paper should be observed. A set of problems or examples on the same sheet should be properly grouped with reference to one another. A neat and uniform system of numbering such sets should be used. If the teacher will insist on these things until proper habits are formed not much further attention is needed.

In the long run the child gets his ideas of school values from the school itself. The above qualities will seem important to the child if the teacher shows strongly enough that these things are important to herself. Therefore in every way the teacher should emphasize the qualities that she desires to develop. One of the best means to use is to show a high degree of pleasure at any work that exhibits the desired characteristics. Rewards for good work, and punishments for poor, are not the best incentives, although they have their place.

6. The Fundamental Processes: Addition, subtraction, multiplication, and division are called the fundamental arithmetical processes. And when we consider that they constitute practically all of the arithmetic that most of us ever use in practical life we see their immense importance.

It is believed that one of the greatest causes of lack of success in teaching these processes has grown out of the fact that they are often treated as though they were one simple, single operation, while as a matter of fact they are all more or less complex, and appear in various forms and phases.

7. Processes Having Different Phases: The comparatively simple operation of subtraction, for example, is found in many types or phases. Thus, we would certainly find the types given below, and in them the procedure in some cases considerably different. For brevity we will use abbreviations M and S for Minuend and Subtrahend.

a. Where M and S are each less than 10. Ex. 9 −4 ; 7 −3

b. Where M and S have an equal number of figures (two or more), and each figure in S has a smaller value than the figure of M above it. Ex. 498 −286 ; 6735 −5621

c. Where S has fewer figures than M, and each figure in S has a smaller value than the figure of M above it.

Ex. 984 —23 = 28639 —518

d. Where both M and S consist of several figures and one figure in S has a greater value than the corresponding figure above it, but the next figure at the left of S is smaller than the corresponding figure above it.

Ex. 6639 —2384 = 34929 —4572

e. Where S has two or more adjoining figures with less value than corresponding figures above them.

Ex. 64374 —16632 = 4832 —2465

f. The presence of zero (0) in M or S might be construed as constituting another type; and evidently other variations might be evolved. The above analysis, however, suits the purpose for the present.

8. Processes Exhibiting Several Steps With Different Phases Also Possible: In such a topic as long division or square root, the processes are complex both on account of there being phases that depend on the chance relation of the numbers concerned to one another and on account of the number of steps involved in the latter case. For instance, in division we have to put the numbers down in certain form, draw certain lines, determine a trial quotient, test it, if unsuccessful try another trial quotient and test again. If successful put down the product, subtract, bring down some additional figures from the multiplicand, take trial quotient again, etc.

Examples of the different phases that arise from chance relations of the numbers might be exemplified by the following:

848962 ÷ 2436
848962 ÷ 958
848962 ÷ 424

Thus (1) differs from (2) as to whether the first figure of the divisor will go into the first figure of the dividend, and all teachers know that this is a serious question to the child beginning the subject. (3) differs from both (1) and (2) in that after the first subtraction takes place there is no remainder, but several figures have

to be "brought down," and the divisor filled by zeros (0's). This is also a stumbling block for the child.

9. The Teacher's Procedure: Without going into a long discussion of the psychological basis of method, it is possible to suggest a simple analogy that may help the teacher to attack the difficulty that is presented above.

If we see an oak tree that is 100 feet high, it would probably be safe to assume that it is 200 years old. Such a tree has grown on the average less than one-sixtieth of an inch a day; its vast bulk has been built up out of sap carrying only minute quantities of the various food elements.

The child's arithmetical growth must, by analogy, be slow and his mental food given in small quantities.

The teacher should first *recognize* the different phases involved in such simple processes as addition and subtraction, etc., and the phases and steps involved in more complex ones. The subject matter should be presented to the child in these little steps and stages, oftentimes *one at a time and whatever drill and repetition and practice* that are found necessary to install each step in the child's mind *must be given,* before proceeding to the next step. These steps thus taken are often of surprising ease to even the average child. (See grade detail, Paragraph 6, Third Year.)

10. New Processes and Topics: In new processes and topics as far as possible use small numbers in explanations, solutions, etc. This frees the attention from the fundamental processes, so that it can concentrate on the new material.

11. Explanations: Explanation of the reason should not be given unless the pupil seeks such explanation, except later in the course. These things belong to the science of arithmetic. It is sufficient for the child to know *how* to "carry" or "borrow," without knowing *why.* If the teacher needs general rules to go by in this matter the following may apply:

a. Teach the process only, without explanations, in all cases where the process is simple and so much used that it will become fixed in the mind and be used automatically.

b. Teach the explanation in cases where the process is complicated and not frequently used, so that the logical memory may assist in recalling it when used.

Obviously the cases where the first principle would apply are many, and those where the latter would apply are few.

12. Remembering and Memorizing: The teacher should clearly

distinguish in her mind between the terms remembering and memorizing. The normal mind has a tendency to remember any experience, and will remember it if the interest and repetitions are sufficient. There is nothing in nature, however, that corresponds to such work as oral or written repetition of subject matter for the purpose of fixing it in our mind. It is by no means meant to imply that there is no place or use for memorizing in the study of arithmetic, but it is meant to be indicated that, in most instances, it is not a successful way; things merely memorized do not stick. Besides, there are so many things that are so rarely needed by the mind that it is more economical to look them up in a book when they are needed. This does not apply, however, to such facts as the multiplication tables, etc. These, one way or another, *must* be gotten into the mind.

13. Kinds of Arithmetic: There are, in general, two kinds of arithmetic or work in arithmetic, which may be distinguished by such terms as pure arithmetic and applied arithmetic, abstract work and concrete work. Both of these have their uses and functions, and both are important. There is a tendency in many systems of teaching, or methods, to give undue importance to one, and neglect the other. The teacher should always avoid this mistake. The true method is generally from the concrete to the abstract, but neither should be neglected. In primary work the emphasis is usually on concrete forms and methods, in higher work it is on abstract.

14. Problems and Examples: In general the two kinds of arithmetic find applications in two classes of exercises, usually designated as problems and examples. On this basis an example would be some exercise in which numercial relations are solved or expressed without reference to any particular objects, e. g., find the product of 24 x 95; while a problem refers to a concrete situation or instance, as; what would 24 gallons of oil cost at 9c per gallon? Examples are more properly designed to secure practice and repetition for drilling purposes; while problems involve more use of the reason and train the mind in applications such as are used in later, and outside-of-school life. Both have their uses, and neither should be neglected. Of course, the example belongs to the abstract or pure type of arithmetic, while the problem exemplifies the concrete and applied type.

15. Problems of Various Steps: A problem containing only one manipulation or process to be performed is often called a one-step problem, while those containing two or three such are called two-step, or three-step, problems. For instance: "John had two apples and Mary gave him three more, how many had he then?" would be a one-

step problem. But: "John had two apples, Mary gave him three more. After eating one how many would he have left?" would be a two-step problem. In selecting problems of a graded degree of difficulty, careful attention should be paid to the matter of the number of steps they involve.

16. Stages in the Solution of Problems: The steps in the solution of a problem are four:

a. Grasping or understanding the problem.

b. Determining or planning the processes to be applied.

c. Applying the processes.

d. Testing the result.

(a.) It is believed that pupils are often unable to solve problems more on account of failure in (a) than for any other reason. In the assignment of lessons the teacher ought to see to it that the pupil can be reasonably expected to understand what is required or sought in the problem. The lack of understanding may grow out of lack of power to read well, or lack of knowledge of the objects or circumstances or relations with which the problem deals; in the latter instance, the child who had never seen or heard of a wagon would not be competent to solve problems relating to the wheels of a wagon.

A very valuable drill is to take a set of problems at recitation times and have the pupils merely state what is to be found. It is also valuable to go further and have them indicate what steps would have to be performed, but stop short of the actual performance.

(b-c.) The whole course in arithmetic is designed to build up ability to achieve these steps. Success with them depends partly upon a clear conception of *what we have given,* and *what we are to ascertain* or *get* or *find.* Many teachers do not hold these ideas strongly and clearly enough before the child. The whole course in arithmetic is to develop in the mind sets or series of processes that fit certain relations between what are given and what are to be obtained. For instance given a certain price and number of articles, and desired to get the total cost, we multiply; similarly, when a certain time and rate of motion are given to find distance. Yet many children in the upper grades fail to solve simple problems of this type merely because they have not been carefully trained in the habit of attending to what is given, what desired, the particular type a certain problem belongs to, and the process such a type requires.

See last remark (a).

(d.) Read what is said under (5-b) about accuracy.

The first test to be applied is to give attention to the result to see

whether it is what was desired; for instance, whether the result was dollars when we wanted dollars. If the problem involves various computations in the fundamental process these should be checked by such methods as recasting addition, testing addition by subtraction, etc. *each step being tested when that step is completed.* The general test of reasonableness should be applied. Also we should apply the valuable form of test that we have already called the approximate-test.

17. The Assignment of the Lesson: After pupils have gotten into the use of the text-book many teachers assign lessons by merely saying, "Take the next page, class is dismissed." Except with familiar material this is not teaching at all. At least part of the recitation, even half or more of it, occasionally the whole time, ought to be taken up in going over advance lessons to see that the child clearly understands what he is to do and what processes are involved, in order that he may be prepared to reason out the proper steps, that he may know the fundamental facts and processes, and that he may know how to test the results. Such an assignment often makes the following lesson a pleasure instead of a task. The child likes to *do,* that is, to *succeed in doing.* The satisfaction that results from doing what he sets out to do is one of the finest incentives in the world for later effort.

18. Written Work: Pupils should never be given written work unless the teacher has time to examine it. Neatness should be insisted upon. (See 5-d). Papers should have all errors marked, or indicated. Do not correct them, however; if correction is necessary it should be done by the pupil, either with or without assistance. Marking papers takes much time, but there is no other way by which the teacher can get a definite knowledge of the results of her work; and this knowledge, while often disappointing, is wonderfully helpful. A time-saving method of marking is to have the class give attention, exchange papers, let the teacher explain each problem on the blackboard, have pupils mark and grade on a scale suggested by the teacher, and then return papers to owners.

19. Home Work: There are many who discourage home work altogether. However, there are probably conditions under which home work is desirable. It should always be carefully assigned, and generally only under the following conditions:

a. When proper surroundings prevail in the home, such as properly heated and lighted rooms in which to study, reasonable quietness,

and freedom from distractions. It may take co-operation between teacher and parent to ascertain or secure these conditions.

b. The giving of work, the theory of which is already understood by the pupil. The teacher should not send the child home with work which he does not know how to do. This will only bring discouragement to the child, with possible criticism and fault-finding from the parents, the latter directed not only towards the child, but also towards the teacher. Study in the sense of using the mind to work out new processes, should be done only in the presence of, or with the help of, the teacher, and only in the lower grades.

There may occasionally be cases allowed where problems present only simple elements that are new; but generally, unless the child already has the mental tools suited to the solution of a problem, he should never be sent home with it—and these tools are not general powers or faculties, but special knowledge and specially trained habits.

20. The Child's Interest: No teacher can teach sucessfully who does not supply immediate interests and motives for the child's work.

In all the living world about us we find that this is nature's method. The animal or human does not eat because he thinks his organs or tissues need replenishment or repair. Nature does not trust to such remote motives; she has taken care to see that a strong craving and appetite for food should arise when the bodily tissues need it; we eat to satisfy this insistent craving. Similiarly a person does not rest because he has a general idea that his muscles are worn down through long sustained effort; he rests because there is a strong *feeling* of fatigue, which is unpleasant, and which resting satisfies. The child plays because he is resistlessly impelled to motion and activity, and this desire for action is the means that nature uses to secure the activity of organs and tissues which is essential to their growth.

We must not always, therefore, expect to get the young child to attend to his daily lessons merely because some day it may be useful to him. (The motive is too remote.) We have to attach the lesson to some natural instinct or desire of his that is active at the time, as his desire to play, to construct, to move, to do.

21. Deficiencies: It is not a good thing, generally speaking, to "turn the class or child back" in the book at the beginning of the term. It discourages him, oftentimes excites the criticism of the parent, and may be construed as a reflection on the preceding teacher's work. It is usually better, if possible, to give oral, supplementary, or outside work of some kind, to make up any deficiencies that

the pupil may show or to refresh his memory on points forgotten during the long vacation. If several members of the class seem not to know essential points of previous work, stop the class work for a part of the lesson and give some oral review right then—if necessary continue for a lesson or two.

22. Preliminary Tests: The teacher should have clear ideas of what the pupils know at the beginning of any term's work. The child entering the first primary grade should be tested by simple questions, and by noticing him while at play. At various times written and oral tests may be given to older children.

23. Promotion Standards: The teacher should have clear ideas of what knowledge and powers are required for promotion at the end of each term.

24. Plan Book: No other one thing that the teacher can do will assist so much towards successful teaching as planning each day's work in advance. Where the teacher does not have time to plan all of her work she ought at least to make plans for the subjects that present the difficulty. Oftentimes the amount of planning that can be done for a class in a very few minutes will help wonderfully in the success of the recitation, and if this is kept in permanent form in a note book the teacher in time acquires a stock of material that is exceedingly valuable. In arithmetic, especially, the primary number work ought always to be planned in advance. Usually enough work for the whole week can be planned on Saturday without very much trouble. The plan for any given lesson ought to give, in brief, the subject matter to be presented, notes on the manner of the presentation, special remarks about points or children requiring attention, etc.

25. The Individual Variation of Children: Recent studies and investigations in the direction of attempting to standardize school work have emphasized more than ever before the importance of the variation in the individual abilities of children, both in the matter of the amount they learn, and of the ways in which they learn. The teacher will often have to use careful thought in representing processes and facts in different ways, if the child can not learn them from the ordinary mode of presentation. Whenever methods or plans suggested in this course of study, or in the textbook, or in the ways already in the teacher's ordinary practice, are not successful, new methods should be tried.

26. Arithmetic Abilities: Modern pedagogy teaches very clearly that there is no general arithmetical power or ability; that arith-

metical talent or skill is made up of many powers or abilities. For instance, it is clearly proven that many children know the multiplications well, but do not make successful application of them in the solution of problems; while other children have the power to reason out solutions but fail in securing correct results on account of weakness in knowledge of the fundamental number combinations. In fact, there seems to be but little real connection between these two things. One source of failure in the school is that it develops certain arithmetical powers to the neglect of others. Some teachers are careful in drilling on the fundamental combinations, but do not properly drill in the solution of problems. This failure accounts for the very large number of pupils who will get a correct answer by an erroneous solution. In the stages of the solution of problems (See General Discussion, Paragraph 16-a) a vast amount of attention must be given by teachers to training pupils to read problems so as to understand what they really mean. One of the most eminent investigators in this field of knowledge has said that it may finally be found that the knowing how to solve problems is at bottom nothing more than the power to read them *understandingly*.

FIRST GRADE.

Grade Detail.

1. Year's Work: At the end of the first year the child should be able to count 100, orally, without objects; to count objects to 100; to add numbers whose sum is not over ten, and make the corresponding subtractions; to make and recognize multiplications by twos and threes, whose product is not over 10; to separate groups of objects not over ten into two or three parts; and to write the numbers up to twenty, in figures.

2. Time and Periods: The teacher should give at least ten minutes to the number work of this year each day of the term.

3. Methods: The work should be largely oral and developmental, and connected closely with the other work and activities of the school, and with the life of the child both in school and out. The child will learn number best through this contact and experience with things, not through the mere words of the teacher. Therefore work should largely fit into the child's interest for play, for action, for handling things, and for constructing things. Measurements should also be made use of.

4. Beginning: During the first weeks the teacher should use the

regular period and other opportunities to ascertain, by simple question and by observation, the number content, or number of facts, already in the child's mind, as for instance:

How old are you?

How many brothers and sisters have you?

How many pets have you? How many kittens are there at home?

How many can you count? Count for me.

Can you count the windows in the school room?

How many children are there in the class?

How many pencils have I in this hand? How many in the other hand?

How many will I have if I put them together?

5. Outline: The work for the year is divided into nine parts called periods. In six or seven-month schools each period should be covered in a month, omitting if necessary, some of the constructions, occupation work, etc. In a nine months' term a month can be put on the same amount of work, giving more of the occupation work, and doing all the work more thoroughly.

1st Period: Counting to 10, with and without objects, orally.
Combinations of objects to 4.
Separation of 4 into parts.
Reading and writing of words to 4.
Learning figures to 4.

Incidental Work: In part, this work can be made incidental to other school work. The child can count in connection with other lessons. Words and other work on the blackboard can be arranged or grouped to show the numbers up to 4. He can note the numbers of the pages. He can hand out pencils or crayons, taking three or four and distributing these, then getting another three or four. Many such devices will occur to the teacher. Teach the familiar jingle: "One, two, buckle my shoe, etc."

Occupation Work: Grouping and counting corn grains, beans, tooth-picks, splints, blocks, paper-folding etc. for teachers who are familiar with such work. Stringing colored beads by twos, threes, fours, etc. Laying splints in forms of simple objects, requiring two, three, or four. Let the child make three—or four—inch rules from pasteboard at lesson periods with teacher helping, and use these in measuring things. Use blocks to build towers, etc., involving certain numbers of blocks upon certain constructions, and parts. Remember that memory depends upon repetition with interest and attention.

Secure endless repetitions of these number facts in varied experiences. (See General Discussion, 3-12-20).

2nd Period. Extend counting to 20.
Combinations of objects to 5, with separations.
Reading and writing of numbers and figures to 5.

Incidental Work. As in period 1, extended to correspond with above.

Occupation Work. As in period 1, but extended.

3rd Period. Extend counting to 30.
Combinations of objects to 6, with separations.
Reading and writing of words and figures to 6.
Grouping by 2's and 3's and combinations of these groups to make 4 and 6.
Distinguishing between cardinal and ordinal numbers to 6.

Incidental Work: As in period 1, but extended. Let the child give the number and line of the word he wishes to ask about, instead of pointing out, in his book or on the blackboard. Simple games of store can be played, which are especially valuable if toys and money made by children are used in the game.

Occupation and Seat Work: As in period 1, but extended. Have children make toy money. Continue constructions, as the child becomes more familiar with the smaller numbers, that can be combined into simple problems. The too long continued use of objects with familiar numbers causes the child to lose interest, and may arrest his mental development. The teacher must always be the judge as to individual cases for it will vary considerably with different children.

4th Period: Counting to 40.
Combinations, separations, to 7.
Ordinals reviewed and extended to 7.
Making figures to 10.

Incidental work: As in period 3, extended.

Occupation and Seat Work: As in 3rd period, extended.

5th Period: Counting to 50.
Combinations, separations, to 8.
Equal groupings of 2's, 3's to make 6, or 8. Corresponding separations.

Occupation and Seat Work: This should be extended and allowed to take the place of part of the incidental work. The child is gaining

more power to do things, but his work should be very carefully planned by the teacher.

6th Period. Counting to 60.
Review combinations and separations to 8.
Review groupings as above to 8.
Writing numbers by figures to 10.

Occupation and Seat Work: Continued and extended. Unusually capable classes and individuals may be given some simple exercises in addition and subtraction for seat work, either copying examples from board, or being given the examples on paper. (See General Discussion 5-a.)

Blackboard drills, and regular recitation periods should be used for frequent reviews over previous period work.

Extend the use of the problem.

7th Period. Counting to 70.
Combination and separations to 9.
Groupings of 2's, 3's, 4's.
Writing numbers by figures to 15.

Occupation and Seat Work: Reviews and drill work, all carefully planned, in advance by the day or week.

8th Period. Counting to 80.
Continue combinations and separations to 9.
Continue groupings of 2's, 3's, 4's, to make 6, 8, & 9.
Separate 6, 8, 9 into 2's, 3's, 4's.
Writing numbers to 20.
Distinguish between cardinal and ordinal numbers to 9.

Occupation and Seat Work. Seek especially to provide appropriate work of this kind, from various sources. The child should now be able to play some simple games involving numbers.

9th Period. Counting to 100. Combinations to 10.
Grouping of 2's, 3's, 4's, 5's to make 10 or less.
Corresponding separations into 2's, 3's, etc.

Review preceding work; use all opportunities to ascertain child's knowledge or lack of knowledge and design work to supply the deficiencies that are found.

6. Explanation of Names, Forms, etc: See Paragraph 11. Do not try to explain anything to the child unless he demands it. In oral work, or occupation work, etc., merely tell him what to do.

Names. Do not use the terms addition, subtraction, etc., especially not multiplication and division. Provision has not been made in the foregoing for teaching the signs +, —, x and ÷. In cases where an unusual class understands the work well enough to give them simple written work they might be taught + and —, but for multiplication use the form 2 3's are six, etc.

Forms: In giving occupation or board work in addition or subtraction the forms $\begin{matrix}4\\+3\end{matrix}$ $\begin{matrix}6\\-2\end{matrix}$ are better than the forms 4+3, 6—2, since they correspond to the forms in which addition and subtraction are mostly found and used in life.

7. Teachers Helps: The following books will be found helpful in suggesting work in number:

Name.	Author.	Designed for.
First Year in Number.	Hoyt & Peet, Houghton Mifflin & Co. N. Y.	1st yr.
Beginner's Number Primer.	Macmillan Co. N. Y.	1st yr.
Number primer.	Baily & German. American Book Co. Cin. O.	1st yr.
Natural No. Primer.	Gibbs American Book Co. Cin. O.	1st yr.
First Journeys in Numberland.	Harrison Waldo. Scott, Foresman Co. Chicago.	1st yr.

8. Games For Number Work: Games useful in teaching primary number work are suggested or explained in the following books:

The Teaching of Arithmetic, Smith. Ginn & Co. Chap. 14, page 107.

How to Teach Arithmetic. Brown & Coffman, Row Peterson & Co. page 142.

First Journeys in Numberland has work based on playing store.

SECOND GRADE.

Grade Detail.

1. Requirements of the second grade:

Review and fix the ability to count, orally with objects to 100.

Teach how to write numbers with words or figures to 100.

Teach hundreds, but not full counting system, to 1000.

Teach addition combinations to sum not over 20.

Teach subtraction, minuends not over 20.

Teach multiplication to product not over 20.

Teach division with dividends not over 20.

Teach counting to 100 by 2's and 3's.

Teach fractions to sixths.

Teach signs, +, —, x, ÷.

In adopted text go to page 49.

In addition and subtraction do not teach "carrying" or "borrowing."

2. Time and Periods: The teacher should give at least 15 minutes a day to the number work throughout the year.

3. Text-Book: The teacher should follow a book, otherwise the work is not apt to be systematically done. The pupil, however, is *not to have a book,* during this grade. Perhaps the best plan is to follow the adopted textbook and this course, as written for the second year, contemplates that this will be done. However, the primary textbooks referred to in 1st grade, Paragraph 9, can be effectively used. It is expected that whatever book is followed the requirements for the year will be met.

4 Methods: A greater use of problems should be made in this year. Much that was said relative to first grade will still apply. The occupation and seat work, games and activities, should be still largely used, and the work more or less correlated with other work and activities of the school.

5. Preliminary Tests: During the first day or so of the term the teacher should give oral tests to guide first month's work, and to ascertain need of review, etc. The child that has not forgotten a good deal of the first year's work is the exception, but the second learning is much easier than the first, and much that appears to be forgotten has not really been entirely forgotten. The reviews ought to bring the child up to last year's promotion standard before beginning advance work.

6. Outline: The outline is made in 9 periods, to be covered as directed in first grade detail.

1st Period. Use Appleton's Primary Book, Articles 1-2 and 4, in connection with the review work of the first week. Omit Article 3 for the present. Supplement it with such other work as is necessary. Teach counting by 2's to 20. Complete book to page 10. Carry addition and subtraction combinations to 12 only, omitting parts of pages 5-6-7-8 and 9 that are inconsistent with this. Omit much that Appleton gives and supply other material. Teach +, — and =, but

$$\begin{matrix} 4 & 8 \\ +5 & -6 \end{matrix}$$

remember are better forms than the linear forms, 4 + 5, 8 — 6.

Occupation and Seat Work: Note suggestions of first grade. Select work from pages 28 and following, on measurements to use here.

For games see: Hoyt & Peet, First Year in Number, pages 25 and 129. See Lessons in Harrison Waldo's First Journeys in Numberland for lessons, based on "playing store." See Gilman & Williams' "Seat Work and Industrial Occupations", Macmillan & Co., New York City, for constructions to be used in "playing store," etc.

2nd Period. Carry combinations to 14, in addition and subtraction. Use part of work omitted in 1st period, in Appleton. Take multiplication combinations to product not over 14, using only appropriate parts of tables and exercises in Appleton's. Cover the text with proper omissions to page 16. Counting by 2's and 3's to 30. Review signs plus and minus and teach the sign X. Review previous month's work, and when you find a deficiency stop right then to remove it, by private or individual work for as long as need be.

Occupation and Seat Work: Make especial efforts to give this work proper attention, so as to secure true development for the child; these activities should always be such that the child's *need* for number will grow out of them in a way that he will feel it, and they should feel the reality and genuineness of the thing.

3rd Period. Carry division to dividend of 14. It is doubtful whether the teacher should yet refer to this as *division,* but the work should still be carried on merely as *separating* numbers into parts, or rather *groups into smaller groups.* Textbook to page 23, omitting all parts that are inconsistent with the requirements of this manual. Count by 2's and 3's to 40. If examples on page 21 are used as written exercises note that quotient is placed above the line over the dividend.

Occupation and Seat Work. As before.

4th Period. Review previous months' work. Teach Roman numbers to 12. See device in Baily & German's Number Primer for teaching "how to tell the time." Extend addition, subtraction, multiplication, and division work to 16. Count by 2's and 3's to 50. Get practice material from textbook, pages 30-35, omitting combinations involving numbers over 16 and fractions.

5th Period. Review Roman numbers and the telling of time. Carry addition, subtraction, multiplication, and division work to 18. Count by 2's and 3's to 60. Get practice material as in period 4, omitting where necessary.

Occupation and Seat Work. Combination of previous work with new devices where possible.

6th Period. Pages 23-27 inclusive. Fractions. Be sure to use objects and drawings very abundantly so that the child will get the

proper concrete idea of the fraction. Use correlated and illustrative material from next section on measurements.

Occupation and Seat Work: Design this work especially in your plans with reference to fractions.

7th Period. Review combinations and all processes to 18. Go back in book to omitted portions and use material there. Get supplementary work from other sources. Take your own copy of the book some Saturday, and with marginal notes indicate in what month each part of various pages comes. When you have taught the month out, indicate by notes what week you think each part ought to come in that month. Count by 2's and 3's to 80. Extend Roman numbers to 15.

Occupation Work. As before. Keep up your interest and attention in this, and write down your most effective devices in your note book in permanent form for future use.

8th Period. Extend combinations in all processes to 20. Drill on counting by 2's and 3's to 100. Extend Roman numbers to page 20. Use textbook, pages 34-41 inclusive, for review material.

Occupation and Seat Work: Provide suitable work for seat, designed to secure necessary drills.

9th Period. Pages 42 and 47 in textbook. Review combinations in addition and subtraction of previous month's work. Review and extend notation and numeration to 1000 as stated in requirements. Begin to round up the work of the year and strengthen weak places. Drill on counting by 2's and 3's, on the required multiplication and division, etc.

Occupation Work. More written work can be done at seats than in previous months; this with oral work ought to be especially designed to secure proper drills. The teacher should also give much care to make the work interesting enough to be valuable.

THIRD GRADE.

Grade Detail.

1. Requirements: The third grade is supposed to complete Chapter II, and take all of Chapter III, in Appleton's Primary Arithmetic. In general, the various arithmetic processes and operations should be carried forward as follows:

Enumeration and notation to 100, including the ability to write numbers in words that far.

Enumeration of exact 1000's to 100,000.

Counting by 4's, 5's, 6's to 100.

Addition of two numbers, sum not to exceed 1000.

Subtraction, with minuend not to exceed 1000.

Multiplication, multiplier not to exceed 9, product not over 1000.

Division, divisor not to exceed 9, dividend not to exceed 1000.

Fractions, in the operations given in text, to sixteenths.

2. Time and Periods: The teacher should give twenty minutes per day to the class in number for this year, throughout the year.

3. Notes on Method for the Grade:

The Textbook. The pupil should have the text-book throughout the year.

The text-book is arranged on the so-called spiral plan, different topics thus being repeated at different times and intervals. While in general each pupil ought to master as much of a given topic as is presented at one time, this arrangement allows him other opportunities for making up slight deficiencies.

Every principle is preceded by illustrative and introductory matter, designed to lead up to an understanding of the material to be taught. Such work in the book is usually labeled "Preparatory". The concrete problems usually follow the drill on the abstract processes, but it is always intended that the processes should be taught at first as concretely as possible.

The following suggestions given by the authors, excellently express very important truths.

a. A principle should first be presented concretely.

b. A principle must be drilled in the abstract until it becomes automatic.

c. Then the actual problems must be given, and the drill continued on them till a pupil can use a principle with ease, rapidity, and accuracy.

d. The drills should be definitely on the subject *that has just been presented.*

e. Drill is to presentation what a fixing bath is to a photographic print: it keeps the impression from fading out.

As an illustration of the above we might say that a child from laying down 3 sticks in each of four groups might realize that 3 times 4 are 12; but after this concrete presentation must come the repetition and drill until he knows without thinking, that is automatically, that 3 times 4 are 12.

4. Model Lesson: Model lesson in measurement to be used in connection with page 66 of the text. In preparing to teach a lesson in measurement—the relations of the units in Dry Measure, for example

—the actual measures should be provided, so that the pupils may obtain the facts at first hand.

a. Prepare the minds of the pupils by discussing with them how various commodities are measured, especially those previously studied, and lead up to the measures which pertain to the lesson. State that grains and fruits are measured by the pint, half-peck, peck, half-bushel, and bushel, as given at the top of page 66.

b. By using some light substance, like oats or sawdust, find the contents of the larger units in terms of the smaller ones. This should be done in regular order, as shown in paragraphs 1, 2 and 3 on page 66 of the text.

c. Write the table of Dry Measure as obtained by experiment, using the form shown on page 66.

d. Follow the making of the table by a series of oral questions, reviewing the facts of the table and their use in simple cases of measurement and reduction; then supply written exercises requiring more calculation based upon the relations and the facts of the table

5. Solution Drills: Read section 7, General Discussion, for an occasional class period exercise. Have a group of problems written on the board, before the recitation time, and keep them covered till the class assembles. Then uncover the problems and ask the class to read the first problem carefully. Ask who can tell how he would solve it, giving various pupils a chance to answer in turn; and if possible, allowing pupils to solve the problems mentally, the teacher writing down the result. Then ask pupils to apply the following or other tests in order.

a. Does it seem reasonable that, for instance, such a quantity would cost about so much?

b. Take the nearest round numbers, or some convenient approximate numbers to those given, and by multiplying these mentally, test the result approximately.

c. Apply addition for subtraction, etc.

This exercise is especially valuable, if used with a list of problems found in the text-book, using the exercise during the recitation period before the assignment of the list for the next lesson. Remember that in these drills the correct answer is not the important thing; the perception of the steps involved, and of the way to test it, are the ends sought. Let the pupils suggest methods of testing, and if various pupils suggest different tests, let each apply his own test and compare results. Try this first with one-step problems and then with several-step problems.

d. Preliminary Tests: During the first day or so the teacher should give preliminary tests, as indicated in second grade. The child should be at least fairly well up to the end of the second year's promotion standard before taking up advance work.

For special notes on the teaching of various processes, read 6, 7, 8, 9, 10 and 11 in General Discussion.

6. Note that the text-book has carefully distinguished the various phases of addition, subtraction, etc. and has given these phases in a good order, with examples graded accordingly. The exercises on addition as given in the text-book are as follows:

a. The addition of one-figure numbers to tens.

b. Addition of one-figure numbers to a two figure number, when the sum of the units (that is, the figures in units place) is less than 10.

c. Column addition with two figure numbers when the sum of each column is less than 10.

d. Addition of a one figure number to a two figure number when the sum of the units is greater than 10.

e. Addition of two-figure numbers, when the sum of the figures in unit's place is greater than 10.

f. Column addition when the sum of the figures in units column is greater than 10.

a-b-c and d are found in Articles 30-31-32-34 as numbered in the text-book, and have the heading as given above; e and f are really the points that are indicated here but they are not so headed in the text. The teacher should read carefully these headings, note examples that illustrate each, and get the distinction of the different phases clearly in mind. In teaching the pupils, teach the steps one at a time, and have the pupil thoroughly understand each one before proceeding to the next. Do not have the pupils memorize the classifications, nor pay any particular attention to the distinctions, except to the one difference that in some cases the sum of a given column is over 10 and in others it is not. Observe how the teaching of "carrying" is taught in article 34, and the note under it, without the use of the word, and without any unnecessary explanations.

The same explanation is given less fully in Article 83, page 124 of the text.

The exercises on subtraction are given as follows: Subtraction,

a. Of a one-figure number from 10.

b. Of a one-figure number from a two-figure number when the units can be subtracted.

c. Of two-figure numbers when the upper figure in each column is larger than the lower number.

d. When the upper number in unit's column is zero.

Note carefully these exercises, re-reading what is said about the exercises on addition, just above. The order of these is a very good one, though there might be some question as to whether it is the best. For instance (a) might be changed to read from 9, which makes it more naturally precede (b). Also, a more natural and easy step to precede (d) might be as follows:

The subtraction of one-figure numbers from two-figure numbers in the teens, the upper figure in unit's place being less than the lower. This would make a more natural introduction to the device that we call borrowing, for if, for instance we take 8 from 13, we do not merely take 8 from 3, but we use the 1 before the three with it. The children ought to be more or less familiar with this fact by this time. However, unless the teacher is able to work this matter out carefully in her mind, it is suggested that she follow the series as given in the text-book.

Observe the test that is suggested in the example illustrating each of these exercises, and take time to teach it and also to require the pupils to use it in their daily work.

7. Outline: (Suggestion: Re-read all of the outline for first and second years.)

1st Period: Review numeration and notation to 100.

Review counting by 2's and 3's to 100.

Counting by 5's to 100. By 4's and 6's to 40.

Teach and drill on separation of the following numbers into equal parts: 10, 12, 14, 15, 18 and 20.

Review addition covered in Appleton's Primary Arithmetic, pages 49 to 55 inclusive (read General Discussion Sections 7, 8, 9, 10, 16 and 17). Write small problems on the board and have drills on what is to be done and how to test results, without actually having solution performed. Use problems on pages 53, 55, 58 and 61 for this purpose, giving this kind of drill before the problems are assigned to be solved for a recitation lesson.

Occupation and Seat Work: This work will, in an increasing degree, be related to the preparation of the written or oral lesson that is to be recited at the next recitation period. In written work, insist on accuracy and neatness. (General Discussion Articles 4, 5 and 6.)

Have each pupil make out an addition table and by actual counting show him that there are only 45 addition combinations in all the ad-

ditions that he will ever have to make, and that if he knows these well he will have no great difficulty with the subject.

2nd Period: Continue review of numeration as in 1st period. Take subtraction as covered in Appleton's Primary Book, pages 56 to 61 inclusive.

Occupation and Seat Work: See 1st period.

3rd Period: Appleton's Primary Book, pages 62 to 77 inclusive. The work covered in the text is devoted to review and practice, and to advance work on mensuration, all of which will furnish valuable material for drill work on the subject matter covered herewith. It is an especially good time for solution drills on problems. Have these frequently before the assignment of the lesson.

Take counting by 4's and 6's to 60.

Drill on the separation of the following into equal parts: 21, 22, 24, 25, 26, 28 and 30.

Occupation and Seat Work: The object work used should be confined mainly to new subject matter. The pupil should, if possible, be asked to make constructions with rulers and blocks for the work in measurement given for the month. Pupils who can not yet tell the time should be taught to do so this month. The teacher should outline solution drills, and other appropriate matter in her plans. Do not weaken the child's interest, and possibly arrest his proper development, by having him spend time merely in counting objects, when he is already familiar with the numbers involved.

Exercises appealing to his play instincts would be such games as store, bean-bag, dominoes made by himself, etc., and used in various arrangements.

4th Period. Text, pages 78 to 91 inclusive.

Pages 78 and 79 and first half of 80 should be made the basis of a brisk oral presentation and board drill by the teacher, and should be covered at one period. Similarly pages 85, 86 and first half of 87. Article 51 and such preparatory exercises can well be gone over by the teacher in the last part of a recitation period whose first part is devoted to work previously assigned.

Take counting by 4's and 6's to 80.

Drill on the division of the following numbers into equal parts: 32, 35, 36 and 40.

Occupation and Seat Work: Article 47, page 79, suggests an occupation that each child should be required to make; extend this and have the child show various small multiplications in the same way,

using variously colored paper. Let the child color with crayons, alternate squares or rows of different colors.

Have child construct in written form the multiplication tables to be used this month.

$$\begin{array}{r} 28 \\ 25 \\ \hline \end{array}$$

The multiplication form, — and the division form, 8) 288, are better forms to use for most work than 28x25 or 288÷8, for they have wider application later.

5th Period. Text, pages 91 to 106 inclusive.

Review counting by 4's, 5's and 6's to 80.

Drill on the division into equal parts 40, 42, 44, 45, 48 and 50.

Drill incidentally on names and meanings of unit's, ten's, hundred's and thousand's places.

Have pupils make constructions, draw and color figures, and fold paper to help them get clear ideas of the work in fractions.

Take weather observations, use the thermometer, etc., as suggested in the textbook, page 104.

Occupation and Seat Work: The teacher should mainly be concerned in maintaining interest in the drill work; repetitions and practice are effective in proportion to the interest maintained by the pupils while practicing.

6th Period: Extend counting by 4's, 5's and 6's to 100.

Drill on the division of the following into equal parts: 52, 54, 55, 56 and 60.

Drill on meaning of unit's, ten's, hundred's and thousand's places.

Text, pages 106 to 116 inclusive.

Occupation and Seat Work: Have pupils develop multiplication tables through the 6's (textbook, pages 136 to 150) and write them in a regular form.

7th Period: Drill on division of the following into equal parts: 63, 65, 68 and 70.

Textbook, pages 116 to 136 inclusive.

The teacher should never omit the oral explanatory drill work, using blackboard freely, giving solution drills, etc. This will not be very effective unless the work is planned in advance, and it is much better for the young teacher to write out the plan.

Occupation and Seat Work: The same as for 6th period.

8th Period: Reviews on whatever work may be found necessary, especially short incidental reviews at recitation times.

The separation of the following into equal parts: 70, 72, 75, 76, 78 and 80.

Occupation and Seat Work: Based on the development of the multiplication tables for the 6's, 7's, 8's and 9's.

9th Period: Pages 154 to 171. The separation into equal parts of the following numbers: 81, 84, 85, 88, 90, 91, 92, 95, 99 and 100. Perform the measurements given on pages 161 and 165. Use our measures as far as possible with such substitutes as sand, bran, water, etc., to be weighed or measured.

In exercise suggested on page 160, leave room in temporary charge of some other person, as an advanced pupil, go to some nearby house and measure of a lot plan. Let pupils make such a plan of their home on a scale drawing. Do not, however, require pupils to undertake such an exercise without ample preparation by the teacher. Have a contest for ideal lot plans, etc. Extend the work further by making a very simple house floor-plan.

FOURTH GRADE.

Grade Detail.

1. Requirements: The fourth grade should complete Chapters IV and V in Appleton's Primary Arithmetic.

2. Time and Periods: The teacher should give at least fifteen minutes per day to the class throughout the year.

3. Suggestions: The teacher should read the detail discussion on Arithmetic and the preliminary parts of the grade detail for third and fourth grades. The spiral plan of the textbook gives excellent opportunities for reviewing the fundamental processes and for strengthening any weaknesses that the pupils may disclose.

4. Preliminary Tests: During the first day, or soon thereafter, the teacher should give some preliminary tests to guide her in the assignment of the first lessons and in the conduct of the work in general.

5. General Outline:

1st Period: Text, pages 172-182. It is suggested that not too much time be given to the formal representation of thousand's, ten's and unit's places, as given on page 172. The device there given is of doubtful value. Short term schools may abbreviate the amount of time given to Roman Notation, given on page 176. Classes already proficient in addition and subtraction may omit these topics, while those especially weak should receive supplementary work in addition to that given in the text.

2nd Period: Pages 183-194. A review of the multiplication tables given on pages 152-3 would be useful before beginning the topic presented here. On page 186 have pupils find the value of some local piece of land, or lot, in a way similar to problems given. On page 191 it may be that the first explanation given will have a tendency to confuse the child rather than to help him and that therefore the second form given should be used with such simple explanations as the teacher may be able to give. The teacher should read sections seven, eight and nine in the general discussion. To those teachers who have difficulty in teaching long division, the following series of steps in its presentation is suggested:

a. A review of such examples as are found on pages 145-9 of the textbook.

b. A list of examples such as the following in which the divisor consists of two-figure numbers, and the first two figures in the dividend will always contain the two figures of the divisor and also in which after every partial division the next term of the dividend brought down is with the remainder sufficient for the next partial division. Examples: 24) 744 31) 9982

c. Some numbers in which we have two figures in the divisor and these two figures are not contained in the first two figures of the dividend, but in which after every partial division the next term of the dividend brought down is with the remainder sufficient for the next partial division: Examples: 32) 1342 43) 2322 24) 13584

d. It will be well here to take a lesson or two for special drill on the matter of finding the number of times that the divisor will go into the first three figures in such examples as have been indicated here, as this is the troublesome thing for most children. One good way to do this is to have the children make a little table. Thus, if the divisor is 24, have them put down

1 times 24 = 24
2 times 24 = 48
3 times 24 = 72
4 times 24 = 96
5 times 24 = 120
6 times 24 = 144

and thus on until they come to the multiple of 24, which gives them the trial quotient that they are looking for. This will give the child one means by which he can always find the desired term of the quotient, although it may seem a waste of time at first. However, he will

soon get to the place where he can tell approximately what the required figure will be by inspection.

e. Next, we should use a series of problems in which numbers are selected without any reference to the relative size of the first figures in the dividend and divisor, but in which when we bring down the next term from the dividend after some partial division the number so obtained is not large enough to contain the divisor so that one or more other figures must be brought down and noughts used to indicate the places in the quotient.

The examples given herewith will illustrate this point and the teachers should secure other examples of this kind for drill.

24) 12120 38) 77254

The above procedure may seem to the beginner unnecessarily long and tedious, but experience has shown that the lack of a procedure in which the child is taught one simple step at a time is one of the greatest causes of failures in teaching division. Care in developing these different steps is better than any attempt to explain division by bundles of splits or other devices based on the values or relations of units, tens, hundreds, etc. The method given above would take perhaps a month or more of time if sufficient drill is given in each step, but it will prove an economical way of teaching the subject.

3rd Period: Pages 195-204. Short term schools if crowded for time may omit the subject of Special Multiples, except tens and hundreds. The work in fractions should receive careful attention.

4th Period: Pages 205-217. Such fractions as have denominators in excess of twelfths might be omitted unless there is plenty of time to take all problems given. Computations suggested on page 212 should be applied to some local home place.

5th Period. Pages 204-225. Make a ring toss board similar to the one shown on page 223. Make rings out of heavy string if metal or wooden ones cannot be secured. Use the game with the fractional values indicated for drill in adding fractions. In the problems on pages 224-5 have some solution drills.

6th Period. Pages 226-231. The processes in fractions in this period should be drilled upon, but no attempt made to explain the underlying reason. Give especial attention to the topic of business problems, page 231.

7th Period: Pages 232-240.

8th Period: Pages 241-250. Try to secure some actual bills from your own files or elsewhere to illustrate the subject. Secure some bill-

heads from the local merchants and make off bills on them. Some day have a game of store. Take the price list from the market quotations given in the daily papers. The work of this period might well be correlated with the writing lessons.

9th Period: Pages 251-263. Use the review lists for two purposes, to-wit: drills and tests. Ascertain the weak places in the preceding work and use the opportunities you have to correct them. To very many pupils this will be the last year's work and they should have this drill in the common processes. In the problems in the general review give a great many solution drills. If the child understands what he must do in many of these problems, it is not necessary actually to perform the work.

FIFTH GRADE.

Grade Detail.

1. Requirements: Pupils should now begin the Appleton's Grammar School book. This is to be covered to page 120, in the year's work.

2. First Day's Work: It is suggested that the teacher at the regular program time for this year's class should have ready a carefully thought out plan for an oral and blackboard test on the fundamentals that have been already taught, in preceding years. If a pupil shows a fair familiarity with these, pages 1-14, especially in short term schools, may be omitted.

3. The best general preparation the teacher can make for the year's work would be to read the General Discussion, and the preliminary remarks to the Third Grade Detail.

4. Outline:

1st Period: Pages 1 to 31. Perhaps in most cases an experienced teacher could well modify the subject matter as given in the book, making additions or omissions, hitting the weak places of the class when found, and strengthening and developing them. The whole month's work is really review work.

2nd Period: Pages 32 to 46. This is also review work, and should be used to suit the needs of each class, with such deviations from the text as the teacher finds best.

3rd Period: Pages 47 to 58. Try to get actual papers to illustrate Articles 50 and 52. For seat work let pupils extend the exercises in Article 63, page 49, by making a table of their own, up to 60, or higher. This is a very valuable exercise.

4th Period: Pages 59 to 68. To many pupils the reduction of fractions is very difficult. Follow each step carefully as here given, taking the needed time for each, before proceeding to the next.

5th Period: Pages 69 to 77. This presents difficulties to many children, but careful teaching will dispel many of them. It is a very important period.

6th Period: Pages 77 to 93. The work assigned to this period may require a little more than a month for completion.

7th Period: Pages 94 to 98. Apply the principles that have been mentioned at various places heretofore in the review work of this period. Give solution drills; use the review to discover and correct the weakness of previous instruction.

8th Period: Pages 99 to 110.

9th Period: Pages 111 to 120. Direct the work of the review towards promotion tests.

SIXTH GRADE.

Grade Detail.

1. Requirements: Appleton's Grammar School Arithmetic, Chap. IV, pages 121- 230.

2. Beginning: Give tests the first day of term, as suggested in previous years.

3. Time: The class should have 15 minutes a day, throughout the year.

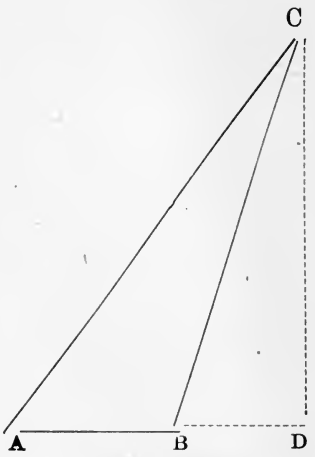
4. Outline:

1st Period. Pages, 121 to 135. In first few days give any reviews in the fundamental operations that may seem necessary. In short-terms schools, or in all cases where necessary review shortens time for advance work, the following omissions may be made:

Omissions: Angular measure; Article 167, page 128. "Questions on tables not much used," page 124.

2nd Period: Pages 136-150. The pupils should be able to recognize and name the various geometrical figures given, pages 138-139, but should not be required to memorize the definitions.

In some of the triangles a little more explanation ought to be given to show that the line representing the altitude often falls without the area of the triangle. Thus in the figure given herewith the line CD is the altitude, but is not inside of the triangle at all. It is also believed that pupils will experience no difficulty in naming or reading lines and figures by means of letters placed at the proper points; as, for instance, the line AC, or the triangle ABC, in in the figure given.



The work of this period is very practical and useful, and will be made more so if actual piles of cordwood, foundations, houses, etc., are measured, and used as the basis of problems.

3rd Period: Pages 151-165. Read General Discussion, Articles 16 and 23. Take especial care with the solution exercises, pages 154-5. The sections on Unitary Analysis and Approximate Results in the text are very important. If pressed for time, Articles 201 and 205 may be omitted.

4th Period: Pages 165 to 177. There are in use two common methods of dividing fractions, the one given in the text and the method by which we point off as many places in the quotient as the number in the dividend exceed those in the divisor. The method of the text is believed to be the better. This is a good period in which to give especial attention to speed and accuracy. If any omissions are necessary Article 207 may be omitted.

5th Period: Pages 178 to 191. Give careful attention to the preparatory paragraphs for the various processes. The teacher can save time and make the work better by indicating what topics the problems for review are connected with and which problems should be omitted.

6th Period: Pages 191 to 202. Teacher will avoid many difficulties by using care in the assignment of the lessons of this period. Many oral and blackboard illustrations will be necessary to explain the difficulties involved in some of the problems. Besides the difficulties connected with percentage itself, there are others growing out of the fact that:

a. Many of the problems are two or three step problems, or even more, problem 14, page 193, having four steps.

b. Many problems contain data that is of no use in the solution of the problem. For instance, in example 14, page 193, the fact that the tailor made 6½ dozen coats has really no essential connection with the issue at all, and the fact that it is given only tends to confuse the child. The child really should be so informed.

c. The percentage in many cases can be computed equally well on the basis of one or on more than one article. In the same problem 14, page 193, the gain can be computed almost equally well on the basis of one coat, or on a dozen coats. In general, percentage of losses and profits has little to do with the amount or numbers involved in transactions, and the child should receive some instruction to help him understand this.

Each lesson assignment should clear the ground for the private work of study of the child, by preliminary discussions, explanations and illustrations, covering such points as these, and related to definite problems that are assigned.

7th Period: Pages 201 to 211. The applications of percentage in insurance, taxes, etc., are usually interesting and clear to the child only in proportion to the degree with which they are brought near to actual life. Therefore these should apply to his own school district, his own home, etc. Try to secure the necessary facts upon which to make problems applying to the immediate neighborhood of the school. Get actual check blanks and actually paid checks. In many places the teacher can get actual insurance policies and other real papers. If in a town, the insurance agent can probably show you the actual map he uses in which all houses of the town are located, kinds of roof shown, etc.

8th Period: Pages 211 to 230. The review lists should be used to test previous teaching, strengthen the weak places, and to get ready for the promotion standards. For this reason in many cases the best way is not to use them straight through, in the order in which they come, but to make judicious selections, omissions and additions.

Read Section 16 in General Discussion and also remarks under Period 6, above.

SEVENTH GRADE.

Grade Detail.

1. Teacher's Preparatory Work: Read the General Discussion, also the preliminary and explanatory part of the Grade Detail for the preceding two years.

2. Outline:

1st and 2nd Periods: Pages 231 to 265. The work of these two periods is essentially a general review. The teacher should give tests, orally for the most part, the first day, to see what use should be made of the review examples and problems as found in the textbook. It may be found that some parts of the review can be omitted, or that certain examples may be omitted and others added.

Short term schools may omit the following topics: Article 269, page 236; Article 276, page 245; Article 284, page 251. Since it is the opinion of some authorities that finding the Greatest Common Divisor, and the Least Common Multiple are not useful, so far as large numbers are concerned, the time given to these subjects may be reduced to the minimum.

3rd Period: Pages 266 to 276.

4th Period: Pages 277 to 290. In each list take the opportunity to give solution drills, and apply any other principles that have been given herein to secure growth in the ability to reason out and solve problems.

5th Period: Pages 291 to 303. It is suggested that short term schools, provided they have to make any omissions, should omit Article 329; Longitude and Time is regarded by many as not being of great importance, and if necessary the amount of time given to it may be reduced to the minimum. The topic, "Unitary Analysis," is of much importance, as a very large number of problems in life, as well as in school, are solved by it.

6th Period: Pages 302 to 311.

7th Period: Pages 312 to 325. Make the subjects of taxes, commissions, etc., of real interest by introducing problems based on local applications or facts.

8th Period: Pages 326 to 339. In case where omissions are necessary topics 379-380, page 329, "Exact Interest," and 393-394, page 337, "Partial Payments," may be omitted, or the time allowed them be greatly reduced.

9th Period: Pages 339-353. If omissions are necessary, Article 398, page 342; Articles 402-3, page 345, and Partial Payments, on page 347, may be omitted or given reduced time.

EIGHTH GRADE.

Grade Detail.

Outline: Half the year should be given to the completion of the textbook; the other half to elementary bookkeeping.

1st Period: Pages 354-378. It is suggested that inasmuch as most of the topics covered in this period have been previously taught, only hasty review of them be taken in the first period. Any omissions found necessary or expedient may be made.

2nd Period: Pages 379-396. It is recommended that the process of square root be taught, without much effort to explain the reason for the various steps, except where especially desirable. The value of "pi" should be memorized, and it should be noted that in partical use many mechanics find 3-1/7 near enough for its value; however, the problems given in the text should be solved with the value as given. The rules relating to the properties of the circle are valuable, and should be mastered.

3rd Period: Pages 397-406. The properties of the pyramid, cone, and the frustrum of each, are in general not as well worth knowing as many of the other figures whose measurements are to be found. If there is time, however, a moderate amount of time should be given to their rules of measurement.

4th Period: Take a general review, applying the suggestions that have been repeated throughout this course with regard to such lists. If time can be found give some attention to the metric system.

HELPFUL BOOKS ON THE TEACHING OF ARITHMETIC.

Teachers wishing to make further study of the teaching of arithmetic are referred to the following books:

Number by Development. By John C. Gray. Published by J. B. Lippincott & Co., Philadelphia, Pa. Gives a complete system for teaching primary number work, given in such detail that it can be applied by the teacher. The system is well recommended by those who have tried it.

The Teaching of Mathematics. By J. W. A. Young. Published by Longmans, Green & Co., New York. Gives full treatment of the teaching of high school mathematics, as well as of arithmetic. Is useful for a general study of the subject.

How to Teach Arithmetic. By Brown & Coffman. Row, Peterson & Co., Chicago. A full discussion of the general subject of methods of teaching arithmetic, historically and otherwise. Quite complete on the subject.

The Teaching of Arithmetic. By David Eugene Smith. Ginn & Co., New York. A discussion in a brief form of the philosophy and status of teaching of arithmetic. One of the best of the smaller works.

Psychology of Number. By McLellan & Dewey. Appleton & Co.,

New York. Discusses the psychology of number and gives several chapters on method.

The Teaching of Arithmetic. By A. W. Stamper. American Book Co., Cincinnati, O. Treats of the history and development and present status of method. Quite a clear and thorough presentation of the subject.

Special Method in Arithmetic. McMurry. Macmillan & Co., New York. Treats the method of teaching quite fully.

The Number Concept. Conant. Macmillan & Co., New York. Gives the historical development of the number idea in the human mind. Does not treat of the method of teaching arithmetic, or of arithmetic in general.

The Teaching of Primary Arithmetic. Henry Suzzalo. Houghton, Mifflin & Co., New York. A critical study of recent tendencies.

NATURE STUDY

GENERAL DISCUSSION.

Statement.

Nature Study deals with common objects and processes as they directly affect human life and interests.

Both the material and method must be for the child rather than for the adult.

Guide for the teacher:

1. Is it suitable material?
2. Can it be seen, handled, etc.?
3. Is it a common thing?
4. Does it have any common interest? Ex.—The house-fly?

The main purpose is to get the child *to see* and *think* for himself. A study of nature enables the child to grasp the forces about him and to turn them to his advantage.

The aim should be to awaken an interest in nature and to give a general acquaintance with it, as it lies nearest to the children.

The children should be brought into actual contact with the object of study, whenever possible, either in or out of the school room. Nature study is a study of natural forces and natural objects in their natural setting.

Emphasis should be placed at all times on plants and animals as living things, and their mutual dependence upon each other.

In the lower grades, nature study, geography and physiology should be taught through the year as one subject and in one way or another appear on every day's program.

The lessons may afford additional material for language and composition work.

In rural schools all the children in Grades I-III should be grouped together for this work.

FIRST GRADE.

Fall.

Birds, trees, flowers, pets, earth and sky should be the general topics.

Teach only the facts which are easily within the child's comprehension.

Birds: Recognition and name of some of the common birds of the locality, their food and feeding habits. Encourage the children to feed the birds and to build bird houses. Some kinds of birds leave us in the fall. Why? Note the time when they go. Note when they return.

Trees: Recognition of trees by leaf, fruit, bark. Winter buds, their color and protection. Study the kinds of fruit grown in the neighborhood.

Field Trip.

Purpose: To identify the forest trees of the locality, and collect specimens of leaves, bark, and, if possible, the fruit.

Note to Teacher: Unless the trip is carefully planned and both the object to be attained and the method of procedure are definitely fixed in mind the trip will degenerate into a mere picnic excursion without object or destination.

Things to Observe: Note the two great classes of trees, evergreen (like the pine or cedar) and deciduous (like the oak).

Observe the bark and leaf of some of the common trees, but do not attempt too many at one trip. It will lead to confusion of ideas.

Collect bark and leaves and fruit when possible. This material may serve for language and drawing lessons.

Note the rings of the end of a log that has been sawed squarely across. If a log cannot be found have one or more of the boys to bring to school blocks sawed off so that the annual growth of the tree may be seen.

Look for diseased trees. How are they injured?

Try to find a place where trees have prevented excessive washing of hillside. Look for beautiful trees suitable for shade.

School-Room Work Based on Field Trip.

Oral story of trip by the pupils.

Have pupils who can write make a list of trees studied. This may serve for a spelling lesson as well as a writing lesson.

A written composition may be required of the older pupils.

Have pupils draw and paint leaves.

Number lessons may be based on the trees observed.

The teacher may think of other ways of using the material and ideas gained by the trip.

Flowers: Learn the names and means of recognizing some of the fall flowers, as the goldenrod, aster, geranium, chrysanthemum.

A field trip might be made to study the fall weeds and fall flowers.

Have children save flower seeds and plant in the spring.

Plant peach pits and apple seeds, after preparing a place for them on the school grounds.

School Calendar.

Have a school calendar on the blackboard or on a large piece of cardboard. Have children observe weather conditions and fill in the calendar daily so that at the end of each month there is a complete record of wind, rain, sunshine, temperature, etc.

See model for home geography under discussion of that subject.

Place a weather vane on the school building. Have the children associate the state of the weather with the direction of the wind.

Winter.

Birds: Name birds that have gone since fall began. Name those which remain.

How to make friends with the birds. Read or tell bird stories.

Insects: Where have they gone? How will they get here again in the spring?

Compare the winter life of the squirrel and the rabbit.

Plants: Where are the wild flowers now?

Call attention to the house plants and the care that is given them.

Can you notice any difference in the buds of the trees as winter goes away? Look closely for changes.

Study the winter coats of buds, especially of the yellow linden tree and the hickory.

Compare length of day and night in fall and winter. What effects produced?

Spring.

Birds: Find out the names of the newcomers. Notice what they are doing and tell only what you see.

Watch at least a pair of birds during the spring and summer and tell the complete story of what you see them do.

Trees: Note changes in the buds, leaves, etc.

What trees leaf first?

Can you gather and preserve the seeds of the elm, the willow, the maple, the poplar?

Watch for the appearance of the apple and peach seedlings, and care for them.

Plant seeds of maple, elm, willow, and poplar in the school garden, and care for them. Note the kinds of soil these trees grow in, and make your garden soil like it.

Seeds: Sprouting of seeds observed; the different ways the seeds come out of the ground; parts of seedlings (roots, stems, leaves); uses of parts of plants.

Plant seeds of the Lima bean and the nasturtium, and learn how to care for the young plants. Try to raise enough seeds for the children to plant next year, as well as to plant in the home garden.

Arrange to care for the garden during vacation.

SECOND GRADE.

Fall.

Birds: Recognition and names, homes, food and feeding habits, sounds or calls; enemies.

What new names can you add to the list of birds you saw since last Spring?

Can you tell anything new about the habits of any bird you have previously observed?

Will you find out all you can about the partridge?

Organize a "Bird Club" in your school.

Insects: Recognition and name of cabbage butterfly, potato beetle, rose bug, cricket, grasshopper.

Can you find some eggs of the butterfly and watch them develop?

Can you collect some caterpillars and watch them feed and develop?

Can you collect and keep some cocoons through the winter?

See Modern English, Book One, page 142, Art. 158.

Plants: Can you add some new fall flowers to your list made a year ago?

Examine the flowers of the pumpkin, the red clover, the sunflower, the morning glory, the aster, and tell how they differ from the flowers of the Lima bean.

Will you try to draw them?

Trees: Can you tell the names of some other trees you have learned to know since last year?

We will try to learn to know the trees by means of their buds, outline, and bark after the leaves are gone.

Seeds: Tell some ways seeds get out into the world.

Can you name some seeds that use wings? Some that steal rides?

Work to Do: Save seeds of pumpkin, morning glory, sunflower and sweet pea to plant next spring.

Plant acorns and chestnuts and watch development in the Spring.

Winter.

Daily observations of weather recorded in class calendar.

Locate north by noonday shadow, east and west by rising and setting of sun.

Difference in length of day and night at different seasons of the year.

Experimental illustrations of freezing, melting, evaporation.

The Sky: What it is; its color; its shape.

Preparation of the garden for Spring.

Feeding and protecting the birds.

Lessons on kindness to animals.

Spring.

Birds: Migratory birds; phoebe, swallow, robin, bluebird, blackbird, catbird, humming-bird, scarlet tanager, oriole.

Special study of one kind of bird.

Protection of birds. Birds are the farmer's friends.

Make a study of the hen, as to breed, color, size, uses and care.

Plants: Watch for the spring flowers and try to name them as they appear.

A love of flowers should be cultivated.

Development of Bulbs: Onion, hyacinth, tulip, crocus.

Bulbs placed in moist saw-dust, soil or water; observation of the development of roots, stems and leaves.

Animals: Frog or toad; development from egg. Its use to man. Its protection. Continue the observation of any other animal previously observed in which the children are interested, as the horse or cow.

The Soil: Observe the effects of freezing on the soil. Running water. Where the best soil is found and why.

The need of good soil may be shown by cultivation of seedlings or plants in saw-dust, in sand and in rich loam.

Climate: Note the effects of the length of the day on the temperature.

THIRD GRADE.

Fall.

Birds: Continue the study as time permits.

Recognition and name of the resident birds—woodpecker, owl, blue-jay, crow, wild canary, cardinal, nuthatch, etc.

Plants: Study of how the farmer selects his seeds for spring planting.

How seeds are protected while ripening; adaptation for dispersal by wind, water, birds, hairy animals.

Collection of dry fruits to show form and method of seed dispersal.

Field Trip.

Purpose: To observe, study and collect specimens of weeds and dry fruits.

Note: Take also the larger pupils, and have them keep a record of the weeds examined.

Things to Observe: Where the greatest variety of weeds are found, near buildings and roads or in the open fields? Why? Notice the variety of ways in which weeds bear their seeds.

Special arrangement of plants for dispersal of seeds. Does one weed produce many seeds?

What effect does the presence of many weeds have on the yield of corn?

Will weeds of a certain kind be more plentiful in a field where crops have been grown year after year?

Have upper grade pupils classify weeds according to their length of life.

1. *Annuals* are those which spring from seeds, blossom, fruit, produce seed and die down the first season (as the ragweed).

2. *Biennials* grow the first season without blossoming, usually storing up food in their roots, blossom and seed the following season and then die down completely (as the burdock and wild carrot, etc.)

3. *Perennials* live and blossom year after year. (As the dandelion, plantain, etc.)

Note: Write the Secretary of Agriculture, Washington, D. C., for Farmer's Bulletins, No. 28, "Weeds and How to Kill Them;" No. 86, "Thirty Poisonous Plants;" No. 195, "Annual Flowering Plants." Write to College of Agriculture, Morgantown, West Virginia.

Classify weeds according to ways of spreading or planting their seeds; that is, by means of the wind, water, animals, mechanical contrivances or artificial means.

The Weather: Note the changes that take place about us with the coming of winter. The ways that we prepare for winter. Make a record of the thermometer readings. Continue the weather calendar.

Winter.

Study of vegetables in the store. Know what is in the home markets and what is not produced at home.

Transportation of products and disposition of them.
Kinds of soil—clay, sand.
A study of trees for building materials.
Study land surfaces, and the effects of weathering.
Record of weather observations.
Life and habits of common wild animals in winter.

Spring.

Natural Phenomena: The sun, effects of heat and cold on water and soil, and on plant and animal life; changes of seasons.

Cultivation of Plants: The needs of plants. Propagation of plants by seeds, by slips, by runners; growth of roots of slip in water.

Experiments: When does sap ooze through stem and leaves? Why do leaves wilt? How do leaves move with reference to light? How do leaves move with reference to light?

Recognition and name of trees, plants and flowers.

Plant for special study: Corn.

Lesson Plans.

The great fault of formal nature study has been indefiniteness, no plan.

A lesson plan should have a definite aim all the way through it.

Three questions to ask in preparing a lesson plan:

1. Is this material suitable?
2. How is this plant or animal to take care of itself?
3. How does it affect human life and how can we help it do its work?
4. Any interesting point not brought out by the other three.

Below are given some lesson plans which it is hoped will aid the teacher by their suggestions.

The Dog (Second Grade).

Aim: To teach sympathetic interest in the dog.

Subject Matter and Method:

1. Introductory talks about each child's dog. Kinds of dogs. How can you tell? Name other dogs.
2. What have you seen the dog do? How does he make his living? How does he help us? How can we help him?
3. Harm some dogs do.
4. How tell a sick dog from a well dog?

5. Tell or read some good dog story.

The Common Toad.

Aim: To see the toad and learn of its human interests.

Subject Matter and Method:

With the toad before the class, either in a screened box, or in a tumbler covered with netting—the cage filled with insects of all sorts, talk with the children about as follows:

1. Do we like pets that help or harm us? What things eat our garden vegetables?

Wouldn't a pet be fine that would eat these pests?

Here is one. Let me introduce him to you.

What do you think of his appearance?

Look at his eye. Teach children that toads do not make warts. Speak of his value. Observe the number of things he eats.

How can we help the toad? Ex.—Build a toad house in the garden.

Window Gardens.

Aim: To teach how to make and to find pleasure in window gardens.

Subject Matter and Method:

1. Teacher should prepare a box to fit the window sill. Place it upon blocks and have oil-cloth under it to prevent water from damaging the wood.

2. Place coarse stones, sand and moss in the bottom to about 1/4 the depth of the box. Fill the box with rich sand loam.

3. Plant flower seeds, bulbs, cuttings, etc.

4. Water every day and keep the surface loose.

Brook Studies (Third and Fourth Grades).

Aim: To learn the nature and life along the brook.

Subject Matter and Method:

Several excursions may be made to a brook, each time with one or more of the following aims:

1. Make exact measurements of length and width.
2. List the trees, shrubs, plants, etc., by and in the brook.
3. Record the animal life seen in or near.
4. Make a map of a section of the brook and land near.
5. What farms or home grounds touch it?

6. Changes which occur in its course from time to time.
7. Land it drains, its source, mouth, tributaries.
8. Soils along its course.
9. Its value to any one.

The Robin—(Third, Fourth and Fifth Grades).

Aim: To see and to learn the habits and value of the robin.

Subject Matter and Method:

1. Go out with the class and sit down to watch the robins.
2. Recognize the robin by song and appearance.
3. Where does the robin like to be? Why?
4. What have you seen the robin do?
5. When does it sing most? Try to imitate the song.
6. Where does it nest? Out of what is the nest made? Number and color of eggs. Find a nest if possible.
7. What does the robin eat? Is it our friend? Why?
8. Can the robin be tamed? How can we help the robin?
9. What are the robin's enemies? How can we protect it?
10. The legend of the "Red-Breast."
11. Refer to readers for robin stories.

The Coddling Moth (Fourth and Fifth Grades).

Aim: To become acquainted with the moth and to learn of its injurious work.

Subject Matter and Method:

1. Have some knotty apples for the class and show the worms in these apples. Cause the children to understand that these apples would be perfect if the worms had not got into them.
2. Tell the life history of the moth. Ask the children to look behind the loose bark of the apple trees to find the silken pod in which the larva stays during the winter.

Lead the children to see that it would be well to scrape off this loose bark in winter and whitewash the trunk of the tree.

3. How many have seen woodpeckers picking into the bark of the apple tree?
4. Tell of the work of spraying.

Leaves of Common Trees (Second, Third and Fourth Grades).

Aim: To learn the names of five common trees as distinguished by leaves, and to learn what leaves are for.

Subject Matter and Method:

1. Have each child bring leaves from five different trees or go with the children to gather them.

2. Have children fasten the leaves on a sheet of paper or cardboard and write the names of the leaves below. Classify them as to shape, size, color, and margins.

3. Let each child stand before the class and name his leaves and tell where he got them.

4. After becoming familiar with the five leaves ask:

"What does the leaf do?"

"What are the leaves good for?"

"What becomes of them?"

5. Read some simple poems about leaves.

6. Drawing lesson on leaves may follow.

FOURTH AND FIFTH GRADES.

Fall.

Note: Nature Study and *Home Geography* should be the same course in the fourth grade. Both should consist of observations.

See course of study for fourth grade geography.

Plants: Woody plants; industries dependent on forests; plants without wood; useful plant products; protection of trees.

Trees: Uses to tree of bark, of wood, and of pith; annual rings and medullary rays (study cross and long sections of piece of wood); uses of heart wood and sap wood to plants and to man; movements of sap (maple); blossoming and fruit formation of fruit and shade trees; uses of wood in building and in furniture (collections); use of trees in producing rainfall.

Emphasize the protection and planting of trees.

Forms of Stems: Erect, prostrate, climbing by tendrils, twining by stems or petiole; why plants seek erect position; underground stems (potato) and bulbs (onion); uses of stored nourishment to plants.

Plant products useful to man.

Vegetables classified as roots, stems, leaves, bulbs or fruits.

Fruits classified as fleshy, stone and dry.

Medicines and *Spices;* bark, leaves, sap, extracts.

Clothing; cotton, linen.

Woods; those used for building, or furniture; characteristics which fit them for such.

Winter.

Animals useful to man; birds, bats, toads, frogs, fish, turtles, ladybugs, beetles, dragon-flies, bees, sheep, cow, goat, ox, horse, donkey, mule, etc.

Particular emphasis should be placed on their value to man:

(1) As destroyers of injurious insects.

(2) As the source of supply of useful materials, including materials for clothing, food, furniture and ornaments.

(3) As beasts of burden.

Animals Harmful to Man.

Cut-worm, potato beetle, cabbage worm, leaf rollers, plant lice, gypsy moth, coddling moth, beetles, tent caterpillars, canker worms, cloth moths, cockroach, flies, bedbugs, ants, mosquitoes, snails, slugs, rats, mice, etc.

Particular emphasis should be placed upon their injuries to man; harmful stages; extermination; work of the government in destroying pests.

Field Trip.

Purpose: To study how soil is made.

State to the pupils that it is the intention to take a field excursion for the purpose of studying how soils are made, and that the field trip will be along the bed of a little stream or creek, starting in the lower valley and following the stream towards its source on higher ground.

Have pupils take tablet or note book and copy the following as it is written on the blackboard.

Things to Observe.

Where (near the source or toward the mouth) do you find the bed of the stream covered mostly with sand? Where mostly with rounded rocks or gravel? Where mostly with large flat jagged rocks?

Notice holes or grooves worn in rocks.

Try to find rocks which have been split open by freezing and thawing.

Look for roots of trees which have grown in rock crevices and have split them open. Find stones that are covered with mosses and lichens. Have the pupils scrape off the lichens from the rock and note the dissolving effect which the roots have had upon the rock's surface.

Notice places where roots or sods have kept the soil from washing away.

Have some of the boys collect samples, (1) of the rounded-off stones or gravel, (2) a sample of sand, (3) sample of the extremely fine sand

mixed with decayed leaves, etc., or ordinary mud, (4) samples of the different soils found on the trip.

Keep the pupils near you on the trip and when the stream is reached proceed rather slowly up stream in order to observe closely.

By judicious questioning draw attention to the points which are to be observed, always giving opportunity for the pupils to make the discoveries themselves if possible.

As each point is noted have the pupils check it off on their list of things to be observed.

The following questions may be asked as the walk proceeds or may be saved until the following day:

1. What means do farmers employ to prevent their hillside fields from being washed?
2. Do trees and grass-covered hills wash as badly as bare cultivated hills? Why?
3. Name all the ways in which nature has broken the rocks down into fine sand.
4. Does very fine sand make good soil? What must be mixed with it before it is good soil?
5. What must be mixed with clay soil to make a loam soil?

Upon returning to the school house the specimens may be labeled and placed upon the specimen shelf.

The language lesson for the following day may consist of compositions on either "Our Walk Along the Stream," or "How Soil is Formed," and the various points observed during the trip must be spoken of in the composition.

The compositions may be made into booklet form with attractive covers and perhaps illustrated with pasted clippings from papers or magazines. When so prepared they make very attractive exhibit material.

Spring.

The School and Home Garden.

The school garden is the laboratory of nature study. In it almost every phase of nature study can find a place. It may be made a source of delight to the pupils.

The next best thing is to have the home garden. It is possible in every school if the school lasts till April. Have the children go home and make the same kind of garden as at school. It may be on a larger scale.

The teacher should go to the homes and see them.

Reward those who have the best gardens.

Many idle children might be kept busy and happy at home in the garden.

Children should be taught to garden. When grown they will have the garden habit.

There can be no objection made to the garden from the standpoint of health, finance, harmony, or pleasure.

Organize corn and tomato clubs, and prepare to have the work carried out among the boys and girls during the summer.

Prepare for a garden exhibit at the beginning of school next fall.

SIXTH GRADE.

Plants.

Subject matter and method: The plants of the farm are grains, grasses, tubers, roots, legumes, fruit trees, vegetables, timber trees, medicinal plants, fiber plants, and stimulant plants. Study each as to (1) identification of seed; (2) where the plant is found; (3) the cultivation; (4) uses to man and the processes by which it is made useful to man; (5) its relation to the soil; (6) its relation to climate; (7) whether an annual, biennial or perennial; (8) the approximate cost of production.

Conditions Necessary to Plant Growth.

A plant to do its best must have (1) air; (2) water; (3) soil which contains the proper chemical clements; (4) cultivation; (5) proper drainage. Make a careful study of the best methods of bringing about the above conditions.

Plant Foods. The plant obtains its food from the air, soil, and water. The leaves of plants are provided with very small openings, or pores, which serve as air passages. Through these openings the plant takes in carbonic acid gas and throws off oxygen. A small cell called a guard cell surrounds each breathing pore. These prevent the escape of an undue amount of moisture. Nitrogen does not enter the plant through the leaves, but is taken up by the roots. It is one of the most important plant foods and is necessary to all plant growth. The amount of nitrogen in the soil differs in different places. In a humid climate the largest amount is found within six to twelve inches of the surface. Land upon which several crops of wheat have been raised in succession lacks a sufficient amount of nitrogen and we speak of the land as run down. Nitrogen can be brought into the soil through decaying organic matter, through rains, and by means of leguminous

plants. Upon the roots of certain plants, called legumes, there are small organisms which bring the free nitrogen of the soil and air into contact with the roots of the plant. Every plant must have certain elements found in the soil. Potassium, calcium, magnesium, phosphorus, sulphur, iron, nitrogen, and chlorine exist in the soil in different proportions. Water acts as food itself, dissolves other foods, and carries them to the places where they are needed. To do this a large amount of water is necessary. The surplus is given off through the leaves. Wet grass in the morning is often due to the moisture given off by the grass rather than the fall of dew. The plant takes the materials which it obtains from the soil and the air and makes them into starch, sugar, oil, protein, cellulose, the elements of the plant.

When we burn a piece of wood in the stove the carbonic acid gas, oxygen, water and nitrogen pass off into the atmosphere, while the mineral matter remains as ashes. For exercises on plant foods, see Bulletin 195, Office of Experiment Stations, Morgantown, W. Va.

Plants and Animals Compared.

In the lower forms of life it is difficult to tell which is plant life and which is animal life. In the higher forms we have no difficulty in noting a few chief differences. The animal takes in oxygen and breathes out carbonic acid gas. The plant takes in carbonic acid gas and breathes out oxygen. The animal can move about while the plant is stationary. The animal lives upon organized material while the plant lives upon unorganized matter and makes it into organized material.

It is clear from our previous study that both plants and animals will live, reproduce and thrive better under certain conditions than under others. Indicate on the map the parts of the state which are the most suited to the best production of animal and plant life. State reasons why you select certain parts of the state as better adapted to animal production than others.

The Home.

The work on the home is introduced thus early in the course for the purpose of stimulating an interest in beautiful surroundings. Teach that the essentials of a good home are, (1) its location as to a market; (2) healthful surroundings; (3) a house well ventilated from cellar to garret; (4) scientific plumbing; (5) an abundance of sunlight; (6) good books, papers and magazines; (7) convenience in the arrangement of rooms; (8) cleanliness; (9) modern conveni-

ences, as bath rooms, electric bells, and telephone; (10) an outside appearance in keeping with the inside.

Corn Contests.

Every boy in the neighborhood, over thirteen years of age, should be induced to enter a corn growing contest. The boys should do all the work of preparing the soil, planting, cultivating, and harvesting. Near the last of October have the different boys bring to school five of the best ears grown. A competent judge should be selected who will award the prizes. A neatly written essay describing the work done should accompany each boy's samples. The essays and samples of corn should become the property of the school. The following year the best ears of corn can be used for seed in the next contest.

References.

The following selections from the Jones' Readers will be helpful in connection with nature study and kindness to animals.

Book III:

What Mrs. Squirrel Thinks. p. 24.
Spring. p. 26.
Frank and the Snail. p. 28.
Don and the Mirror. p. 32.
A Strange Pet. p. 35.
The Flower's Thanks. p. 54.
The Robin and The Voice. p. 67.
Lions. p. 70.
A Queer Dinner. p. 77.
The Tree. p. 81.
Two Bright Little Squirrels. p. 83.
The Story of a Piece of Coal. p. 110.
The Clouds. p. 115.
Born in Prison. p. 120.
How Morning-Glory Climbed. p. 125.
A Child to a Rose. p. 156.
The King of Birds. p. 187.
Petition of the Song Birds. p. 234.
Bergetta's Misfortune. p. 254.

Book IV:

Experiences of a Caterpillar. p. 50.
The Bees. p. 69.
The Baby Owl. p. 90.

AGRICULTURE

SEVENTH AND EIGHTH GRADES.

General Statement.

This course in agriculture is based upon a few main topics which come within the experience of the pupil. The textbook should be used as a guide. Exercises, projects, contests, field excursions, booklets and supplementary data are the real agents for teaching this subject.

Note Book.

The note book here described should be used for general notes and is not a part of the agricultural booklet which deals with special subjects. A five-or ten-cent book is suitable. It is used for keeping a record of things observed, questions investigated, experiments, field trips and supplementary information given by the teacher. Each day's work should be preceded by the date and the name of the subject. If an experiment is conducted, the materials used should be described; the method of procedure stated; the observations listed; and the final conclusion drawn. Experiments should always precede the subject matter of the text. Pictures or drawings will make the record more complete.

The note books should be carefully read and graded by the teacher. Make them supplementary English or language lessons.

Agricultural Booklet.

The agricultural booklet is the one most important agent in the successful teaching of agriculture. This applies equally to the common school and the high school. It correlates the work in agriculture with a greater number of subjects than any other device that has yet been invented. In brief, it encourages supplementary reading; teaches the correct use of English; better penmanship; trains in neatness; develops originality; encourages investigations and brings the home, school and farm into a closer co-operation. Pupils respond readily to this method of instruction. They take a pride in making their booklets neat and attractive. In brief, it is live and up-to-date agriculture.

Directions For Making Booklet.

1. Determine early in the year the subjects you are going to teach.

2. Consult the list of Farmers' Bulletins, State Agricultural College Bulletins, and write to several of the State Experiment Stations for a list of their publications. A list of these stations will be found on page 312 of Soule and Turpin's Agriculture, or will be supplied by the U. S. Department of Agriculture.

3. A uniform paper about 9″x12″, that will take ink, should be selected.

4. Follow an outline of study in writing up topics. Paragraph headings and chapters should be indicated.

5. One page should not have more than two illustrations and frequently one is sufficient. Illustrations should be placed where they are most effective. They should always help to make the subject matter clear.

6. Illustrations may be taken from bulletins, farm journals, catalogues, newspapers or may be original drawings.

7. Information should be obtained through observation, experiments, local people, bulletins, farm, journals, text-books and class discussions.

8. No material should go into the booklet that is not thoroughly understood. Do not permit copying, which is so frequently done in writing essays. Short quotations are sometimes in order.

9. A booklet may accompany the class study or it may serve as a laboratory exercise where there is little equipment for laboratory work.

10. Notes should be written up, corrected by the teacher, copied and transferred to the booklet.

11. The cover should be of a heavier paper, neatly illustrated, and should bear the name of the pupil and the date.

12. The first inside page should be blank except for the name of the study, which should be in the middle of the page.

13. The second page should be the index page.

14. Pages should be numbered in the upper right hand corner.

15. Tie the pages together with a cord or ribbon.

16. After the booklets have been examined by the parents, they should be kept on exhibition at the school.

17. Local prizes will add interest.

The booklet is an intensive study of one subject and should not be attempted with every subject which is studied. In each com-

munity, one agricultural interest predominates. It will be well to make a more intensive study of this interest. The booklet is one of the ways.

Bulletin Board.

The agricultural bulletin board is one of the effective ways of bringing agricultural information before children or older pupils. The blackboard space in most schools is rather limited and needed for the daily work. Select a part of the school room which is easily accessible and cover it with burlap or thick cloth. Whenever pictures or clippings are found, which are of interest, they should be pinned on the bulletin board and attention called to them. The data given may frequently be used for the opening exercises. Children should be urged to bring such data to school. Two brackets with a board on top will make a suitable shelf to be placed underneath. Farm bulletins, papers, and books can be kept here. A teacher should subscribe for at least one farm journal. The U. S. Department of Agriculture, Washington, D. C., sends out each month a list of the previous month's publications. Teachers should see that their names are on the mailing list. Also have your name on the mailing list of the State Agricultural College. Make your bulletin board reflect the work of your school.

Collections.

Make collections of soils, fertilizers, grasses, cereals, weeds, photographs, designs, plans, catalogues, bulletins and farm journals for use during the school year.

Correlation.

Correlate agriculture with the other subjects of your school and thus vitalize the entire school work. Send to the U. S. Department of Agriculture for several copies of Farmers' Bulletins dealing with phases of agriculture which are discussed in your text. Use these for supplementary reading. Make the reading lesson an informational lesson as well as an exercise in developing the ability to read. Explain and discuss the subject matter. Apply your arithmetic instruction to the actual problems of everyday life. Oral and written reports of field trips and discussions of community activities constitute live language lessons. Apply the principles of grammar to activities which later demand the use of grammar.

Preliminary School Exercises.

The success of your work in agriculture will be judged by its results. Instruction which ends in the school room is of little value. The criticism is often made that students are unable to carry out the instruction which they have received. As a result the entire work in agriculture is judged a failure. It is put down as another school fad. No criticism is more unjust or more injurious than this one. If proper precaution is taken, it can be avoided. No outside demonstration should be undertaken until it is preceded by careful school room instruction. For instance, if an exercise in grafting is to be successfully conducted, it should be preceded by several class exercises. Grafting wax should be prepared and several grafts made on pieces of wood which are brought to the school room. Experiment until the process is thoroughly understood. Before outside pruning is done, several different shaped trees should be pruned in the school room. Consult pictures of trees which are pruned properly and improperly. Experiment upon trees along the roadside. Experience makes perfect. Plans for laying out the school grounds, home gardens and crop rotations should be carefully worked out on paper. Sketch hot beds, buildings, etc., according to scale. Treat seed grain for smut, and potatoes for scab. Give exercises in selecting seed potatoes and cutting them for seed. In brief, make certain that the principle is understood and that it can be applied.

Contests.

The contests mentioned below are for immediate use in the schools. Boys' and Girls' Club Work and the many other contests extending over long periods of time are not considered. Agricultural booklets, debates, rope tying, accuracy in judging types of soil, different kinds of wood and lumber, grading grain, stock judging, making drawings of farms and farm buildings, obtaining agricultural data, etc., are subjects for contests. Quickness in tying knots is interesting and instructive. Write the Minnesota Agricultural College, St. Paul, Minn., for Extension Bulletin No. 33, Rope Tying. The Iowa Agricultural College, Ames, Iowa, has published a similar bulletin.

The Text-book.

The textbook is simply a guide. It supplies supplementary data to be used in making an intensive study of those phases of agriculture which apply to local conditions. Cotton, rice, hemp and sugar cane are not grown in this state and should receive but little attention. Place little emphasis upon textbook assignments. Do not attempt to

follow the order of subjects given in the text. Fall is the season to study corn, ripening fruits, and vegetables. The winter season is the time to study domestic animals and prepare for the spring work on cereals. Naturally the soil and its preparation are closely related to the successful production of farm crops. Soil study should, therefore, just precede cereals. A few subjects carefully studied are of infinitely more value than a superficial study of many.

Home and Community Projects.

Practical instruction in agriculture finds its expression in the home and community. In brief, it serves immediate ends. At the beginning of the school year, each pupil should be required to choose one or more projects as a part of his work in agriculture. Outlines of these projects will be supplied by the Supervisor of Agriculture.

Bulletins.

In addition to the bulletins published by the West Virginia College of Agriculture, the following bulletins published by the United States Department of Agriculture, Washington, D. C., are suitable for West Virginia conditions:

Corn—Nos. 229, 409, 414, 257, 253, and 415; wheat—Nos. 250, 82, 118, 129, 165; oats—Nos. 67, 97, 138 and Circular 88; legumes—Nos. 339, 318, 315, 278, and 260; tobacco—Nos. 82, 83, and 143; cotton—No. 36; potatoes—Nos. 35, 149, 244, and 365; fertilizers—Nos. 44, 192, 222, and 225; orchards—Nos. 87, 113, 154, 181, 198, 283, and 293; garden—Nos. 54, 255, and 218; weeds—Nos. 28, 86, and 188; insects—Nos. 99, 127, 155, 247, and 146; cattle—Nos. 22, 63, 55, 106, 166, 141, 73, and 32; horses—Nos. 170 and 179; hogs—Nos. 100, 183, 205, and 272; sheep—Nos. 96 and 49; poultry—Nos. 41, 51, 128, 141, 236, 287, 64, and 200; bees—Nos. 47 and 59; birds—No. 54; farm management—Nos. 242, 280, 210, 62, 95, 126, and 155.

Soil.

All life, whether plant or animal, is dependent upon the soil. Someone has said that the prosperity of any nation depends directly upon the fertility of its soil. We select this subject as one of the first to be taught in the fall. Certain phases can more easily be taught in the spring when farmers are more actively engaged in the cultivation of the soil.

Teach:

1. The kinds of soil—as sandy, clay, loam and limestone.

2. How and from what each of these soils is derived.

3. Composition as to the different materials which are found in a soil.

4. Uses of soil—as (a) attachment for plants, (b) to supply plant food and moisture.

5. How certain soils are adapted to certain plants.

6. Water in the soil. Its function is (a) to dissolve materials in the soil so that they can be taken up by the plant, (b) to furnish water for the plant and carry the food where it is needed, (c) it helps in chemical processes.

7. What makes a soil "heavy" or "light"?

8. How soil may be improved by the use of manure, commercial fertilizers, drainage, rotation of crops and growing leguminous plants.

9. What is meant by tillage and the different kinds of tillage—such as general tillage, intertillage, shallow and deep tillage?

10. The purpose of tillage; (a) to loosen the soil particles, (b) to conserve moisture, (c) to dry the soil by exposing it to the atmosphere, (d) to destroy weeds, (e) to bring plant food in touch with the young roots, (f) to form a suitable seed bed.

11. Tools used in tillage and the cost of each.

12. The value of good tools and the necessity of proper care.

Exercises: Ask the pupils to bring to the school room as many different kinds of soils as can be obtained in the locality. Classify them as stated above. Examine them as to their rock particles and decayed vegetable matter. Tie a cloth over the upper end of a lamp chimney; fill the chimney two-thirds full of one soil and pour in some water. Note how long it takes for the water to reach the bottom. Do the same with the different kinds of soil. Conclusion. Show that, by filling a lamp chimney full of soil and setting it in a basin of water, different soils will absorb different amounts of water. Do the same with different soils. Measure in each case the amount of water used. Plant seeds in the different kinds of soils and note the growth of the young plants. Show that soil must have heat, light, and moisture to produce growth. Test soils with litmus paper.

Farm Crops.

Corn.

Teach:

1. History. Corn was first found growing in America. Mexico is probably its native home. The early settlers found it growing in

various parts of North America. The Indians knew its value and grew it extensively.

2. Classification. There are six races of corn—dent, flint, pop, sugar, soft, and pod.

3. Characteristics of each race.

4. The varieties best adapted to West Virginia.

5. Production. The United States produces about 2,500,000 bushels. The average yield is 24 bushels per acre. The corn states are Illinois, Nebraska, Iowa, Kansas, Indiana, Ohio, and Missouri.

6. Cultivation. Plowing, harrowing, planting, hoeing, and harvesting.

7. Selecting and testing seed corn.

8. Uses of corn—(a) food for live stock, (b) human food, (c) kinds of leaves, (d) flowers, (e) number of ears.

Exercises: Visit a corn field and note the number of ears on a stalk. Select ears suitable for seed. Use West Virginia School Agriculture on Corn. Test kernels for germination. Judge corn according to the following points:

1. Trueness to type 10
2. Ear 35
   a. Shape (10)
   b. Length (10)
   c. Circumference (5)
   d. Weight (10)
3. Rows 10
   a. Number
   b. Space between rows
   c. Space between kernels
4. Butt 5
   a. Size as compared with entire ear
   b. How filled
5. Tip 5
   a. Space between tip kernels
   b. How filled
6. Kernel 15
   a. Length
   b. Shape
   c. Dented or smooth
   d. Uniformity
   e. Number of kernels
   f. Total weight
7. Color 10
   a. Grain
   b. Cob
8. Cob 10
   a. Circumference
   b. Rigidity
   c. Weight

Total 100

Name of Pupil ....

Wheat.

Study wheat in the same way you studied corn.

Examination Card:

1. Variety.
2. Trueness to type.
3. Spike.
    a. Bearded or smooth.
    b. Length.
    c. Shape.
    d. Color.
    e. Number of spikelets.
    f. Arrangement of spikelets.
    g. Number of fertile spikelets.
4. Kernel.
    a. Texture.
    b. Number of damaged kernels.
    c. Weight of 100 kernels.
    d. Germination test.
5. Stem.
    a. Length.
    b. Number of nodes.
    c. Number of leaves.
6. Root system.
    a. Kind.
    b. Length.
    c. Length determined by what?

Other cereals may be studied in the same way.

The Leguminous Plants.

The legumes include clover, alfalfa, soy beans, cow peas, velvet beans and vetch. The most important of these are clover and alfalfa. They are of great value to the farmers, as they enrich the soil by depositing nitrogen therein. The value of alfalfa as a forage crop cannot be overestimated. It has been demonstrated that a ton of alfalfa hay contains as much food value as a ton of wheat bran; also that an acre of alfalfa will produce more digestible food than an acre of any other farm crop, including shelled corn and corn silage. The above facts are cited to illustrate the necessity of instruction along the lines of alfalfa cultivation. The West Virginia Farm Bulletin, Vol. I, No. 4, will be sent to teachers upon application.

Teach:

1. The meaning of the terms leguminous, bacteria, nodules, and ferment.

2. The more important leguminous plants and their characteristics.
3. The necessity of growing alfalfa in West Virginia.
    a. Soil requirements.
    b. Inoculation.
    c. Seeding.
    d. Cutting and curing alfalfa.

Exercises: Have the pupils bring to school plants showing nodules. Study them as to size and shape. Explain that the nodules contain bacteria which take the nitrogen from the air and through a chemical change render it available as plant food. Discuss the yeast bacteria, vinegar, sour milk, and cheese ferments. Plant seeds in soil that has been inoculated and in soil that has not been inoculated. Conclusions.

Farm Animals.

The farm animals—cattle, sheep, hogs, horses and poultry—should be studied during the winter months. The following outline for the study of cattle is suggestive for the study of the other farm animals.

Cattle.

Classification. There are three classes:

a. Beef—Shorthorn, Aberdeen Angus, Durham, Hereford and Galloway.

b. Dairy—Jersey, Guernsey, Holstein, Ayreshire and Brown Swiss.

c. Dual Purposes—Devon, Red Polled and Brown Swiss.

Characteristics of each:

a. Beef Animals. Such an animal should be well developed in loin, back, thighs and rump. Smooth outlines, short, stout legs, with a broad back. Fine hair, pliable skin and small bones.

b. Dairy Animals. The dairy cow has a large stomach, udder is wide and full, milk veins large and branching. When looked at from the front, the animal has a wedge shape. The hip bones are prominent, neck small, head small, skin clear, hair fine and soft. Such an animal must produce at least 250 pounds of butter per year.

c. Dual Purpose Animals. These animals are used for both beef and dairy purposes. They should have some of the most marked characteristics of the other two. For the small farm these are well adapted.

Topics for Study: Each of the above named beef, dairy and dual purpose breeds should be taken up in the following manner: (a) origin and history; (b) appearance; (c) adaptability to the state; (d) milking and beef qualities; (e) other interesting points. Visit a farm, if possible, where cattle may be judged according to the above points. Milking, cleanliness about the barn, pails, churn, quantity and quality of milk from different cows compared, should be considered.

Exercises: Make a special study of the dairy cow as outlined in West Virginia School Agriculture, Vol. IV, No. 4, and the accompanying chart. Make an animal survey of the neighborhood. Outlines for this survey will be supplied by the Supervisor of Agriculture. Have pupils figure out the cost of keeping and feeding a steer; the same in rearing a calf. Compute the profit in raising a hog. Have pupils visit a hog-butchering and write compositions describing what they saw. Have each pupil describe how milk and butter are handled at home. Emphasize the necessity of keeping milk free from bacteria. Test the milk in the community with the Babcock tester. Judge several cows according to the following characteristics:

Parts.	Points.
1. Head—Lean and long. Muzzle clean cut, mouth large, eyes large and bright	4
2. Neck—Fine, medium length and thin	2
3. Forequarters—Withers, lean and thin; shoulders angular and oblique; legs short and straight; shank fine; feet well placed	4
4. Chest—Deep and thick, giving large lung capacity	10
5. Barrel—Deep, wide, full, and medium long; ribs broad and far apart; back straight and open jointed	14
6. Hind Quarters—Rump long, wide and level; thighs thin and roomy, hips wide apart, on level with back; legs straight and short, and feet well placed	5
7. Udder and Milk Veins—Udder large, full, wide, extending far front and back, covered with loose, pliable skin and fine hair. Not fleshy	20
Teats convenient size, evenly placed and far apart	5
Milk veins large, branching, crooked and long, entering large and numerous milk wells	8
8. General Form—Wedge shaped as viewed from front, side and top, prominent joints and clean bones	10

Quality—Loose mellow skin, medium thickness, covered with fine soft hair 8

9. Symmetry and Beauty of Form—Alert, powerful, vigorous, not easily excitable 10

Total 100

Teacher's Corrections. 1 .....; 2 .....;
3 .....; 4 .....; 5 .....;
6 .....; 7 .....; 8 .....;
9 .....; Total .....
Student .....
Date .....

Orchards.

Certain sections of the state are well adapted to fruit growing. In these sections special emphasis should be placed upon this phase of agriculture. Small fruits are adapted to all parts of the state.

Teach:

1. The location of the orchard—as to soil, sunlight, and drainage.
2. Preparation of the soil.
3. Transplanting the young trees.
4. Management.
   a. Cultivation.
   b. Pruning.
   c. Spraying.
   d. Thinning, gathering, storing and marketing the fruit.
5. Care of bush fruits—such as raspberry and blackberry.

Exercises: Prepare the Bordeaux mixture and lime-sulphur solution. Teach the children to recognize the common garden and orchard pests. Give demonstrations in spraying. Call for reports of home orchards and their yields. Select apples suitable for market purposes. See West Virginia Experiment Station Bulletin on Fruit Growing.

Enemies of Plants.

All plant life is likely to be attacked by insects or diseases, which will lessen the vitality of the plant, and in cases of fruit bearing plants, the crop is likely to be completely destroyed. Children should be able to recognize the common insect pests and fungus diseases and know how to combat them.

Study:

1. Insects.
   a. Those that bite—such as the potato beetle, cabbage worm, etc.
   b. Those that suck—such as the chinch bug, plant lice, squash bug, San Jose scale, etc.
2. Fungus diseases—as potato scab, brown rot on peaches, rusts on cereals.
3. Bacterial diseases—as fire blight in pear and apple trees.
4. Study the remedies.
   a. Fungicides—Bordeaux mixture, lime-sulphur.
   b. Remedies for biting insects—Paris green, arsenate of lead.
   c. Remedies for sucking insects—lime-sulphur, kerosene emulsion, tobacco.

The College of Agriculture will supply bulletins which will be of service in teaching the above subjects.

Farm Accounts and Records.

This subject can be taught as a part of practical bookkeeping. Teach:

1. How to make a farm inventory.
2. A debit and credit record with each field or crop.
3. A debit and credit record of live stock.
4. A debit and credit record of the poultry.
5. How to keep a breeding record of animals.
6. The cost of insurance, taxes and depreciation in value of farm equipment.
7. Cost of living on a farm.
8. Amount of capital needed.

Problems of Agriculture.

The following topics are given as supplementary to the regular outline. They should receive attention from time to time, not as assigned work, but as topics to be discussed between teacher and pupils: How the farmer spends his time during the different months of the year. The leading crops raised in the community. The success of the farmer depends upon his education, liking for the work, energy, economy, past experiences, use of improved methods, selling at the right time, and planting what is demanded. What are some of the improvements in farming? Compare farming today with

that of twenty years ago. How can farm life be made more attractive? Compare farm life, under the present conditions, with the life of an ordinary boy in the city. Do country boys and girls find life in the city attractive? Give a summary of all the advantages of life in the country. Study West Virginia as one great farm, considering its climate, soil, and methods of transportation in different parts of the state.

Conclusion.

In the above outline only those phases of agriculture are selected which apply to West Virginia conditions. It is most profitable to study a few things in which the boy is interested and in which he can secure definite results and relate all other work to these main projects. Teachers who find that they have time to study more than is outlined above should consult the State Supervisor of Agricultural Education for further assistance.

GEOGRAPHY

GENERAL DISCUSSION.

Statement.

The course in geography as here outlined is limited to the fourth, fifth and sixth grades. If geography is properly taught in these grades the fundamentals can be intelligently acquired within this time.

In the seventh and eighth grades the geography will be taught only in connection with other subjects, such as history, civics, and agriculture, the textbook being used as a reference book only. Example:

Suppose the history class is studying the Spanish-American War. The pupils should turn to their geographies and fix in their minds the location of the places mentioned in the history and review the geography of the West Indies and Philippine Islands as to physical conditions, occupations, customs, governments, etc. Or, suppose the class in agriculture is studying wheat. It would be a good plan to compare the wheat crop of the United States with the other wheat producing countries of the world as to yield, methods of production, cost of production, markets, etc.

The work in the first three grades has been provided for in connection with nature study.

FOURTH GRADE.

OUTLINE (FIRST HALF YEAR).

Method and Purpose.

Method: No book is to be used. The knowledge in this grade is to be gained from actual observations in the region of the home.

Purpose: To furnish the child through *observation* and *experience* with such *fundamental* ideas as will help him to form correct notions of the countries or regions which he has not seen.

It is expected that nature study in the lower grades will have contributed to home geography so that certain sections of this portion of the subject may be passed over rapidly.

Seasons.

Observations: Beginning in September with the autumnal equinox, a series of weekly or monthly observations should be started and carried on through the year with the purpose of determining:

(1) Time of sunrise and sunset, with varying lengths of day and night.

(2) The altitude of the sun at mid-day, or angle of sun's rays as shown by the length of shadow cast by a vertical post.

A record should be kept of these observations. Special care should be taken to make accurate observations on the vernal and autumnal equinoxes (March 21st and September 22nd), and the winter and summer solstices (December 21st and June 22nd).

While making these observations, the directions, north, south, east and west, should be taught. The expressions "up" for north and "down" for south, should never be used. As the observations proceed, the pupil will see that the sun rises exactly in the east and sets exactly in the west only at the time of the equinoxes. He should learn to think of north as the direction in which the shadow of a vertical post falls at noon.

At the end of the school year these observations should be summarized and a conclusion reached as to the cause of the change of seasons. The pupil should be able to see that summer is warmer than winter because the days are longer, the nights shorter, and the sun's rays nearer vertical, and that change of season is due to the changing length of day and night and the changing angle of the sun's rays. That vertical rays heat more than slanting rays will usually be demonstrated by a single day's observation of the difference in temperature between sunrise and noon. The above explanation of seasons is the only one that can be made in the child's experience and the only one that should be attempted in this grade. The shape and motions of the earth should not be mentioned in this grade in connection with the season, and the explanations which involve this use should be postponed until the advanced text is introduced.

Weather Observations.

Parallel with the above observations, a simple record of weather observations should be kept. This should include the condition of the sky, temperature, precipitation, direction of wind, etc., for each day in the school year.

The following table is suggestive:

Date.	Sky.	Temperature.	Precipitation.	Wind.
Sept. 20	Clear	Warm 75°	None	S. E.
Sept. 21	Cloudy	Cooler 60°	Rain	S. to S. W.
Sept. 22	Fair	Cold 40°	Light Frost	N. W.

Remarks:

Under remarks, a record of many interesting phenomena may be kept, such as first snow, first robin, wild geese flying north, first violet, etc.

Aim to associate wind directions with condition of the sky, temperature, moisture and rainfall, and to determine what winds give us clearest skies and coolest weather; or warmer temperature, cloudy skies and rain, or our heavy snow storms. The explanation of all this will come in the later grades.

Note: See "First Notions of Geography"—D. C. Heath & Company, New York, for valuable suggestions and directions for weather observations and the seasons.

The Surface of Land.

These are to be studied through field trips and excursions.

The teacher should plan each trip in advance. Several recitations may be based upon one field trip or excursion.

Note: See McMurry's "Special Method in Geography," for suggestions on field trips and excursions, etc.

Study the slopes between the school house and the pupils' homes. Have the children decide which is easiest to travel over. Hence the relation of slopes to roads.

Study the view to be seen from the schoolhouse windows, or in the nearest playground or field. Emphasize irregularity of surface.

Learn the names of the local features. Give terms like hill, plain, valley, gully, gorge or canyon, divide, alluvial fan, after the form has been studied.

Show as fully as possible how people depend upon slopes.

Study the location of towns with reference to slopes. Pick out certain buildings and study their location, as the church on a hill, a store where roads meet.

Study distribution of trees and note the relation of occupations to slopes in local landscapes.

As far as possible, give illustrations of variety of forms from your home state by means of photographs to be found in railroad time tables and folders.

Show views from other illustrations to bring out the point that similar forms are found in other distant regions.

Have the children summarize the local landscape features by means of definitions made by themselves.

The Water on the Surface of the Land.

Note the necessity of water for plants, animals and people.

Tell how drinking water is obtained in your home locality. Explain wells, or springs, or city water supply.

Study the water of a stream and note the sediment contained. Discuss the origin of sediment.

Follow changes of surface form due to running water; study a local valley as to width, depth, quality of slope; study the rapidity of flow on different slopes and note falls, rapids, and lakes, if any are to be seen in the neighborhood.

Study parts of a stream and develop definitions associated with local water courses and valleys.

Study uses of water in commerce, manufacturing, and irrigation.

The Soils.

Observe the weathering of rocks, the crumbling banks, the rusting of tools to show how rocks decay and form soil.

Have a box of soil in the room and study its fineness, color, feeling and the way it takes up water.

Test different kinds of soil by having the children plant seeds and compare results.

If possible, study a soil section out of doors. Notice the layers of soil and subsoil in excavations and railway cuts.

Show how soil is necessary to plants and study effects of running water on soils.

Discuss means of retaining the soil on slopes.

Occupations.

Find out the leading industries of the locality, their location and importance.

Study the need of division of labor in families and communities.

Have the pupils work out the number of different occupations that contribute to their needs.

Illustrate agriculture by window gardening or school plots.

Make a study of the various crops raised in the neighborhood, the soil upon which they grow, the manner of harvesting these crops, and the uses to which they are put.

Illustrate grazing by observation of cattle, sheep or horses.

What lands are suitable for grazing and the best grasses for this purpose.

Study manufacturing in any factory to be found in the neighborhood. The grist mill, saw mill, creamery, brick yard, and foundry, are typical in that the manufacturing plant is stationary and the raw material must be transported to the power or the factory.

Lead the pupils to see that the conditions necessary for manufacturing are:

(a) Power, such as water power, steam, gasoline and electricity.
(b) Raw material.
(c) Food supply for employees.
(d) Labor.
(e) Commercial facilities, wagons, freight cars or vessels which bring raw material to the factory and take away the manufactured product.

Bring out the advantage of money as representing wealth and as an aid to commerce.

Transportation and Commerce.

Study local trade.

Lead the pupils to see that commerce grows out of diversity of needs which in turn grows largely out of diversity of occupations.

Show how transportation involves distance and direction.

Have the pupils prepare lists of raw materials and manufactured articles exported from and imported into the neighborhood.

Have pupils find out the kind of plows, buggies, binders, sewing machines, and other articles of farm and household use, and where they are made. In this way the connection may be made between the home section and distant sections.

Study means of transportation and the effect of good roads as an aid to commerce and happier living.

Products of the World Brought to us Through Commerce.

Have the children make lists of food products used by them that come from a distance.

Tell the children stories about some of the distant regions of the earth that supply them with necessities, such as coffee from Brazil, tea from China and Japan, rubber from the Amazon valley.

Rice, bananas, coffee, cocoa, valuable woods, rubber, and quinine will show the relation of home locality to southern North America and northern South America.

Hides and meat products will illustrate our relation to southern South America; furs the colder parts of North America and Eurasia; olives, olive oil, cheese, embroidery, and linen from Europe; silk, spices, pepper, tea and rugs from Asia; ivory and diamonds from Africa; and wool from Australia will show the relations to these countries.

Select the products the children have seen or heard about. Make a brief study of the lives of the people, of climate and of plant and animal life in each region considered.

Compare with home locality.

The pupils have found that the home region is dependent upon, and contributes to, many other regions in furnishing man with food, clothing and shelter. *It is because of this mutual dependence that these distant regions should be known.*

On a globe have the children locate distant places which they have heard about and compare in distance and direction with home locality.

Note: Follow the manual as the topics are presented, organize it, make your observations with the pupils, and have them draw their conclusions.

Maps and Mapping.

The ability to read and use a map is of permanent value to the pupil. A map is not a picture. The features presented on a map are represented by means of symbols which often have no resemblance to the features themselves. The map work in this grade should make the child familiar

(1) With the things and geographical features themselves.

(2) With the use of symbols by which these features are represented upon maps. The pupil should not be required to use a symbol in mapping until he has become familiar through observation, experience or pictures, with the thing symbolized.

The first maps made by the child should be of things and places so familiar to him that neither time nor attention need be spent upon the things themselves but upon the idea of representing them by symbols. A map or plan of the school room and the school yard should first be drawn. From the first let the maps be drawn to a scale—a half or quarter of an inch on the paper representing a foot, yard, or rod on the region mapped. As the observation work is extended so as to include streams, valleys, hills, alluvial fans, etc., the mapping of these various features should be extended until the child is familiar not only with the region and its map, but with the general

idea of mapping. The idea of direction should be introduced early. Maps drawn in this grade should always contain some symbol to indicate directions, such as an arrow which points north, or some other symbol. It is not necessary to have pupils make maps with north at the top, but it is necessary that north be indicated by some symbol, so that the pupil may early acquire the habit of looking for the direction symbols on every map.

When desirable use colors to distinguish features on the map.

References for Comparative Home Geography.

1. Big People and Little People of Other Lands—Shaw. American Book Co. 30 cents.
2. Children of the Cold—Schwatka. Ed. Pub. Co. 50 cents.
3. Children of the Palm Land—Allen. Ed. Pub. Co. 50 cents.
4. Each and All—Andrews. Ginn & Co. 50 cents.
5. Northern Europe. Ginn & Co. 30 cents.
6. Seven Little Sisters—Andrews. Ginn & Co. 50 cents.
7. Strange Lands Near Home. Ginn & Co. 30 cents.
8. The Wide World. Ginn & Co. 30 cents.
9. Toward the Rising Sun. Ginn & Co. 30 cents.
10. Under Sunny Skies. Ginn & Co. 30 cents.
11. The Little Folks of Other Lands—Chaplin. Lathrop Pub. Co. 60 cents.
12. Excursions and Lessons in Home Geography—McMurry. Macmillan. 50 cents. (For Teachers.)
13. How We Are Clothed—Chamberlain. Macmillan. 40 cents.
14. How We Are Fed—Chamberlain. Macmillan. 40 cents.
15. Around the World, Geographical Readers, 3 Vol. Silver, Burdett & Co.
16. The Snow Baby—Peary. F. A. Stokes & Co. $1.20.
17. Home Life in All Lands—Morris. Lippincott. $1.50.
18. Fairbank's Home Geography. Ed. Pub. Co. $1.00.
19. How We Are Sheltered. Macmillan Co. 45 cents.

(SECOND HALF YEAR).

General Geography.

I. Globe study, three weeks. (General directions for carrying on this work given below.)

II. Transition from globe to map.

III. Elementary textbook taken up and completed to page 98.

IV. Regional study of North America and the United States.

I. Globe study.

(1) Form and size of the earth.

By enlarging the conception given by the globe, try to give some idea of the immense ball on which we live, how it is composed of rock, mantled over with loose material and soil of varying depth; that immense depressions are filled with water forming oceans and separating the larger land masses or continents. Instead of having diameter and circumference committed to memory as such, let them be used as data for simple problems, such as "How long would it take a man to travel around the earth on the equator, traveling at an average rate of ten miles an hour?" At best the globe must stand as a symbol for ideas and facts too large for the comprehension of the child.

(2) Motions of the earth.

(a) Revolution around the sun. Little can be done to make this motion mean much to the child because he cannot experience it. He may learn that it is the time required to make one such revolution that determines the length of one year. This revolution is only one of four or five factors which, combined, produce seasons. Review the observations on seasons made in the first half year and the conclusions thus reached.

(b) Rotation and some of its consequences.

(c) Succession of day and night.

(d) Directions, north, south, east and west, are due to rotation. North is toward the north pole. The north pole is one end of the axis, and the axis is due to rotation. Do not use the expressions "up" and "down" for north and south.

(e) Show how directions are indicated on the globe by meridians and parallels; the former run north and south, the latter run east and west. Give much drill in using these direction symbols.

(f) Locations of places on the earth. Show how meridians are numbered east and west from a given prime meridian, and the parallels north and south from the equator, and how from numbers on the lines which intersect at a given place it is possible to tell the location of places on the globe. Give abundant drill in thus locating places until the child can readily tell the approximate latitude and longitude of any point on the globe.

(3) Distribution of land and water. continents and oceans.

(a) Positions of continents on the globe, their direction from

each other, the bounding and intervening oceans. Explain these great land and water bodies to the child before introducing their symbols. The idea should always come before its symbol.

(b) General shape and form of continents, with a few of the most important capes, peninsulas, islands, seas, gulfs and bays.

(c) Relative size of continents as estimated from globe.

Note: For this work, an eighteen inch globe is almost a necessity. One of the best is the pendant globe, sold by the Caxton Company, of Chicago.

(4) Climatic conditions on the earth.

Review what the pupils learned in the First Half Year as to the relation of high sun and low sun to the warm temperatures of summer and the cold ones of winter. Let the teacher go in imagination with the class to the equator, and tell them where the sun rises and sets and where it is at noon at various times during the year, emphasizing the steep rays which always fall at that parallel, so that the pupils from their own experience with steep rays and a high sun ought to infer the hot temperature of this region. Then go with them to the "Land of the Midnight Sun," with its slanting rays and low sun and let them infer the conditions of temperature there. Locate the doldrum belt near the equator with its hot, moist climate, with its daily rains. Contrast with this rainy belt the hot dry regions on either side, over which the trade winds blow making such deserts as the Sahara, Kalahara and the one in Australia. Now contrast with the uniformly hot dry climate of the deserts or the uniformly hot and moist climate of the doldrum belt, the variable weather of the temperate zone as it has been observed by the child.

II. Transition from globe to map.

The pupils should have become so familiar with the globe that they are able

(a) To locate any place in approximately its correct latitude and longitude.

(b) To tell directions on the globe.

(c) To know at a glance the names of the various continents from their shape and outline.

It now becomes necessary to represent various features of surface and drainage, etc., with greater detail than can be done on the globe, so that the map must be introduced. In order that the pupils do not form wrong conceptions, owing to the flat surface upon which

a map is made, the use of the sand table is recommended. Here the relief form may be represented and the concept transferred to the map. When the pupil knows the meaning of all the various symbols, can tell direction on the map, locate places when their latitude and longitude are given, and knows how to use the scale, he is then prepared to read and study the map.

The use of the map. In studying a region, there is much information concerning position, form and boundries, size, surface and drainage that can be much better read from the map than it can be from the text. This work should be done in the class and from good wall maps that show the physical features of the region studied. The work of map reading should be done at first under the direction and questioning of the teacher. Organize your class into an imaginary exploring party, and as you sail in imagination up the Mississippi, Amazon or Nile, tell them by word and picture of the wonderful sights that would greet their eyes were they really sailing up those rivers. Make the symbols on the map speak of real rivers, mountains and plains. When the map has told all it can in this way, let the pupils read what the text has to say. What it does say will mean something because they are prepared to understand it.

The atlas habit. It is suggested that the teacher start the pupils of this age in the formation of right habits. Whenever, in the preparation of a reading, history or geography lesson, the pupils read of a city, river, mountain or other geographical feature, the teacher should insist that he stop and look up in his atlas the location of the place. Places located in this way have something with which they can be associated and will be remembered the longer because of this association.

Map drawing. Map drawing is a means to an end, and this end is the better understanding of the position, form, size, surface, drainage, etc., of the regions studied. The sand table should be used only as a means of expression by the child, as a means of teaching new ideas. If the child has studied at first hand some gully or valley, the reproduction of his conception of it is an excellent means of fixing the concept in his mind.

III. Regional Geography, see II above.

Outline for Continental Study of North America.

I. Position. Consult and locate on globe.

1. In zones. pp. 24, 25.
2. In hemispheres. p. 25.

3. In relation to bordering waters. p. 41.
4. In relation to other continents. p. 20.

II. Form.
1. General: Roughly triangular. pp. 40, 41.
2. Actual, determined by:
   (a) Its more important indentations. pp. 40, 41, 43.
   (b) Its more important prolongations. pp. 40, 41, 43.

III. Size.

1. As compared with other continents. This should be done only approximately. No area in square miles is to be given.

2. As shown by the fact that North America stretches entirely across the temperate zone and reaches into the Frigid zone of the north and the Torrid zone of the south.

3. How long would it take to journey in various directions across it at different rates? Give problems to be solved.

IV. Relief. (Data to be secured largely from map.)
1. Highlands:
   Rocky Mountain highlands. pp. 40, 41, 43.
   Appalachian highlands. pp. 40, 41, 43.
2. Lowlands:
   Plains:
   The Great Central plain. pp. 40, 41, 43.
   The Atlantic Coastal plain. pp. 40, 41, 43.
   The Gulf Coastal plain. pp. 40, 41, 43.

V. Drainage.
   Gulf drainage. pp. 40, 41, 43.
   Atlantic drainage, pp. 40, 41, 43.
   Pacific drainage, pp. 40, 41, 43.

VI. Distribution of people: Where dense, where sparse, as determined by the occupations of the people and the food producing capacity of the various sections. Supplement text.

VII. Political divisions. p. 43.
1. United States and Alaska.
2. Dominion of Canada.
3. Mexico.
4. Central America.

The order of topics in the study of North America is followed in the study of *the United States as a whole.* VIII (Relief), IX

(Drainage), X (Climate), and XI (Possibilities of Occupation), are to be treated with greater fullness because of their greater importance. It is the large general truths of relief, climate, natural resources and industry which are wanted, not isolated evidences of geographical relationships.

VIII. Relief:

1. This includes a study of the differences in character, elevations and extent between the two great highland masses. In this connection the chief ranges should be named, located and characterized.

IX. Drainage.

Chief drainage lines and their relation to the relief forms. Drill most upon the streams which are commercially important.

X. Climate.

Show the position of the United States on the globe. It will be seen that the northern part is near the Frigid zone. Locate the home state and the city or village nearest to the school. Have the children recall the usual weather conditions during the summer and winter in their own home region. Show pictures of southern scenes and let the children tell how the northern and southern seasons differ. The children, through their nature study should be familiar with the processes of evaporation and condensation of moisture.

Explain how moisture evaporates over the sea and is borne into the interior to be condensed and fall as rain over the land. Show upon maps the distribution of rainfall in the United States. Have pupils locate on wall maps regions of

1. Abundant rainfall:

(a) Where the rain is well distributed and where the temperature is warm enough to produce abundant vegetation, and

(b) Where the rain is abundant in amount and in a warm region, but where not well distributed, resulting in arid or semi-arid wastes, and

(c) Where the rain is abundant; but in cold regions, resulting in snow.

2. Medium rainfall, enough so that crops will grow.

3. Slight rainfall, result, deserts.

XI. Possibilities of occupation.

As a result of the relief, temperature and rainfall, it will be found that certain parts of the United States are suited to certain indus-

tries, so that it is possible to divide the states into groups in which the same industries are carried on. In this way locate:

1. The chief agricultural and grazing sections and their chief productions.
2. The mining regions and the most important minerals.
3. The lumbering regions and the most important trees.
4. The manufacturing regions.
5. The fishing grounds and the chief catches.

XII. States.

Give the pupils an idea of what is meant by a state; point out physical regions and state groups and have them identify these groups by their leading industries.

Only a few of the leading industrial and commercial cities should be studied, and these should be closely identified with the industrial region in which they are situated and with their leading productions.

Alaska should be considered with the United States.

FIFTH GRADE.

(First Half Year).

The first half of the year should be spent upon the following countries:

South America.
Europe.
Asia.
Africa.
Australia.

The chief points to be covered are:

1. Position.
2. Form.
3. Size.
4. Relief.
5. Drainage.
6. Climate.
7. Occupations and industrial regions.
8. Centers of population and chief cities.

Simplify the work. Confine the work to the study of geography. Do not go into too many details.

(Second Half Year.)

West Virginia and the first 60 pages of Frye's Higher Geography. The study of the state should be thorough. It is more easily com-

prehended, both physically and industrially, than more distant countries; even more so than distant parts of the United States.

Outline for West Virginia.

I. Position.

II. Form.

III. Size as indicated by (1) the latitude, (2) distance by scale of miles east and west, north and south, (3) area as compared with other states.

IV. Relief:

1. The Alleghany mountains.
2. The Plateau section.
3. The rounded hills.

Draw map of state to simple scale showing these regions.

V. Drainage: The sources of rivers, their courses and directions.

1. The Potomac system.
2. The Ohio system.

VI. Climate.

VII. Soils: Uplands, and flood plains.

VIII. Vegetation.

1. The forests and the lumber and paper industries.
2. The general diversified agriculture of the state.
3. The grazing regions and the cattle industry.
4. The market gardening and truck raising regions.

IX. Animal Life.

X. Mineral wealth and mining industries.

XI. Manufacturing.

XII. Distribution of population.

XIII. Transportation and trade routes.

First 60 pages of Frye's Higher Geography.

If the work has been well done in the fourth grade, the first 60 pages can be quickly covered. It will be mostly a review with more intensive work on seasons, winds and rainfall, land forms, and physical conditions.

SIXTH GRADE.

South America, Europe, North America, the United States and West Virginia, should have been studied in the order mentioned, with special reference to their great industries and the physical and social conditions influencing them.

Colonies, no matter where located, if important enough to be noted, are to be studied in connection with the mother country. The commercial relations existing between the home countries and their several colonies are to be emphasized.

Begin text on page 137. After the study of South America and Europe as indicated above, return to page 61 and make an intensive study of the United States and West Virginia.

Note the Special Topics given below for development and comparison with like conditions in other lands. These topics should lead to general truths. These topics will furnish material for reveiws of other places on the globe, and should be studied in connection with the geography of the United States.

The outlines below are suggestive, but the teacher should emphasize the topics from VII-XV rather than those from I-VI.

I. Position.
  (1) Relative.
  (2) Absolute.

II. Form..
  (1) Relative.
  (2) Actual.
    (a) As shown by map.
    (b) Indentations.
    (c) Prolongations.
  (3) Continental shelf.

III. Size.
  (1) Relative.
    (a) Compared with other continents.
    (b) In relation to oceans.
    (c) What part of the whole earth.
  (2) Actual.
    (a) Extreme breadth and length of time it takes to make the journey.
    (b) Number of square miles.

IV. Relief. (Data secured largely from map.)
(1) Highlands including plateaus.
(a) Position.
(b) Extent.
(c) Elevation.
(d) General character.
Broken with numerous passes, or
Continuous, with few peaks or passes.
Structure, mountain folds, or blocks,
Chief passes.
(e) Arrangement:
Parallel ranges.
Cross ranges.
(2) Relations of the highlands to the great continental slopes, great drainage systems, interior basins and the nature of coast lines.
(3) Lowlands.
(a) Position.
(b) Extent.
(c) Structure.
(d) Kinds:
Rolling plains.
Coast plains.
Flood plains.
Delta plains.

V. Climate.
(1) As indicated by angle of sun's rays or latitude.
(2) As modified by elevation.
(3) As influenced by winds from ocean.
(4) As shown by isothermal map.

VI. Rainfall:
(1) Region of moderate and heavy rainfall.
(2) Influence of highlands upon winds and rainfall.
(3) Location of rainless areas and reason therefor.

VII. Drainage:
(1) Chief rivers and their relation to the land forms which they have been instrumental in creating.
(2) Lakes:
(a) Fresh water lakes.
(b) Salt water lakes.

VIII. Soil:
(1) That which has been formed in place.
(2) That which has been transported.

IX. Zones of vegetation, as dependent upon
(1) Temperature, as determined by latitude, altitude, proximity to water, and influence of ocean currents.
(2) Rainfall.
(3) Character of the soil.

X. Zones of waste, as dependent upon
(1) Lack of moisture.
(2) Altitude.
(3) Latitude.
(4) Too much moisture.
  (a) Swamp.
  (b) Jungle.
  (c) Bad lands.
(5) Poor soil.

XI. Distribution of animal life.

XII. Distribution of mineral resources.

XIII. Distribution of population, as dependent upon possibilities of occupation, resources, supply and demand and commercial advantages.

XIV. Development and location of centers of population as showing the needs of the people for commercial centers, manufacturing centers, and government centers.

XV. Development of commercial and trade routes, resulting from the effort to obtain the products and the patronage of the other peoples of the world.
Harbors.
River systems.
Railways.

XVI. Political divisions and government.

Special Topics.

Special topics suitable for development and comparison with like conditions in other lands. These topics should lead to general truths. They will furnish material for reviews of other places on the globe.

They should be studied in connection with the geography of the United States.

I. *Northeastern Section and North Central Section.*

1. In a cotton factory at Lowell, Mass.
2. The arsenal and gun factory at Springfield.
3. The woolen factories at Fall River.
4. Watches and watch makers at Waltham.
5. In a shoe factory at Lynn.
6. The granite quarries of New Hampshire.
7. Among the light houses along the coast.
8. New York harbor and Ellis Island; landing of immigrants.
9. Garden farming in New Jersey.
10. In a West Virginia coal mine.
11. A blast furnace at Pittsburg.
12. The oil fields of West Virginia.
13. The peach orchards of West Virginia, Maryland and Delaware.
14. The oyster beds of the Chesapeake.
15. Tobacco culture of Virginia and Kentucky.
16. The hard and soft woods of West Virginia.
17. The prairies of Illinois.
18. Chicago as a trade center. (McMurry, pp. 63-73.)
19. Pineries of Michigan. (McMurry, pp. 73-85.)
20. Copper mines of Michigan and lead mines of Wisconsin.
21. The wheat fields of Minnesota and the Dakotas.
22. The flouring mills of Minneapolis.
23. The corn and live stock of Indiana.

II. *Southern Section.*

1. The rice fields of the Carolinas.
2. Semi-tropical fruits of Florida.
3. Cotton culture in Georgia and Mississippi.
4. The levee at New Orleans.
5. A sugar plantation in Louisiana.
6. A cattle ranch in Texas.

III. *Plateau Section.*

1. Farming by irrigation.
2. A mining camp in Colorado.
3. Gold and silver smelting at Denver.
4. A trip to Yellowstone Park.

5. Fruits and flowers of California.
6. Salmon fishing on the Columbia river.

Encourage home reading. The school library should have a number of supplementary readers, geographies and aids to the study of this subject.

Books suitable for the use of students:

Brigham—From Trail to Railway.
Carpenter—Europe.
Carpenter—How the World is Fed.
Carpenter—How the World is Clothed.
Chamberlain—How We Are Clothed.
Chamberlain—How We Are Sheltered.

Books for the Teacher:

Roschelau—Great American Industries.
McMurry—Special Method in Geography.
Mill—Choice of Geographic Books for Reference.
Nichols—Topics in Geography.

Geographic Journals:

The Journal of Geography.
The Bulletin of the American Geographical Society.
The National Geographic Magazine.

UNITED STATES HISTORY

GENERAL DISCUSSION.

Material, Purpose and Method.

All the material used in the lower grades, whether classed under the head of literature or history, should tend to develop in children an interest in men and their achievements, either real or fictitious.

The material used in the grades below the fifth should include:

(1) Folk stories, fables, fairy tales and nature myths.
(2) Stories of the Indians, Eskimos, and Northmen.
(3) Facts in local history.
(4) Essential facts concerning holidays and anniversaries.
(5) Patriotic songs and poems.

If this material is presented to the children in the right way the following results should be attained: The pupils will acquire the power to imagine events in the past; they will appreciate heroic characters and noble deeds; they will gain a knowledge concerning some of the simpler facts of American history, particularly as related to places of local interest.

If these results are to be secured care must be exercised in the method of treatment and presentation. Story telling by the teacher is an excellent method of presenting history to young children. In fact, it is the only satisfactory method of presenting stories to children. Therefore, the teacher, if he does not already possess it, should acquire the art of telling stories. "He must acquire skill in making facts and situations vivid to children." That is, he must arouse and cultivate their imagination so that they will construct mental pictures that approximate the distinctness of reality.

"The previous knowledge of children, their home experiences, as well as facts remembered from books, must be called out in the development of the topic or story under discussion." That means, of course, that the teacher must keep within the experience of the child even in such simple work as story telling.

By the time the children reach the third and fourth grades oral and written reproduction may be required of them, leading to complete stories. These exercises, if conducted properly, will provide excellent drill in oral and written language.

SECOND GRADE.

Indian Life provides excellent material for children in this grade. It is the time in the life of the child when he is most interested in the subject and if he is taught properly he will acquire much information which will prove helpful when a more serious study of the subject is taken up later in the course.

Stories suitable for this grade will be found in (1) Pratt's Legends of Red Children; (2) Husted's Story of Indian Children; (3) Husted's Story of Indian Chieftains; (4) Burton's The Story of the Indians of New England.

In connection with Thanksgiving day the story of the Mayflower and the Pilgrims would be interesting. Study: The Landing of the Pilgrims; Story of the Mayflower; Plymouth Rock; the First Thanksgiving Day; Miles Standish; Samoset and Squanto; the First Winter.

References:

Tiffany: Pilgrims and Puritans. Pratt: Colonial Children. Lane and Hill: American History in Literature.

Later in the year birthdays of great men may be celebrated. Since Washington is one of the first men in which the children become interested, his life may be studied in this year. Suitable material may be found in any of the following: Pratt: American Stories for American Children. A First Book in American History, by Eggleston. Hart: Colonial Children.

During the latter part of the year local events may be studied. In every community there are some things of interest which will appeal to the children. Such things as naming the district, the first settlements in the community, local railroad, the town, the school house, and the church.

THIRD GRADE.

Continue the work begun in the second year; that is, make a more extensive study of the life of the Indians, of great men and women, great events in the making of our country, which are within the comprehension of the children; the early history of the neighborhood should receive some attention in this grade.

Material suitable for this work may be found in such books as: Stories of Pioneer Life, Florence Bass; Great Americans for Little Americans, Eggleston. (See reference in Grade Two for material on Indians and Indian Life.)

FOURTH AND FIFTH GRADES.

The work in these grades should include, in addition to that suggested for the third grade stories of great discoverers, explorers, inventors, and other persons distinguished in American history. The pupils are now able to read stories for themselves, and should be encouraged to do so. Although the teacher should continue to tell and to read stories to the children.

In these grades the scope of treatment should be enlarged, especially as to local history and holidays. Also, a more detailed study should be made of great men and women in history.

The following books will furnish excellent material for study in these grades: American History for American Children, Pratt; First Book of American History, Eggleston; Ten Great Events in History, Johonnot; American History in Literature, Lane and Hill; Heroes of Discovery in America, Morris.

It will probably be necessary to correlate history with other subjects in all grades below the fifth. But where the work is properly organized this can well be done. The subject is one of importance and should receive as much attention as conditions will permit. In the lower grades the subject can best be taught in connection with language and literature. The stories used in the language lesson can often be selected from history. Also, subjects for composition may be selected from the field of history. In fact, when the work is well planned, all three can be taught successfully together.

SIXTH GRADE.

Textbook: Montgomery's Beginner's American History. Note that the story of our country is presented in this book by giving the biographies of many of the prominent men of our country. The story element predominates over the cause and effect idea of history. The principal facts in the history of a colony, or of a period, are grouped about the life of some prominent men of the time. Have pupils note the strong traits of character in each of these men, as they serve as examples and ideals to arouse enthusiasm, and have an unestimated power in giving the initial impulses toward the formation of character in children. Furthermore, "such biographies disclose to a child the broad arena of possible action, and at the same time give an impulse to the full stretch of his own best powers. So far as biographies are typical or representative, they give insight into the common interests of society and are the natural introduction to public concerns."

Since the time allotted to the text is limited do not try to supplement it too much except by material of the same kind.

Train in topical recitations so that pupils will acquire good oral expression. Have some of the stories reproduced in writing, as this exercise will furnish training in the art of composition and will at the same time make a deeper and more lasting impression on the pupil's mind of the event studied. Make special occasions prominent by relating some story, well founded, in regard to Thanksgiving day, Fourth of July, Memorial day, birthdays of men and women.

Encourage inquiry into local history—naming of districts, settlements, the local railroad, the town, and any other things that may be of interest. In history as in other subjects the material used must be within the range of the child's experience.

SEVENTH GRADE.

(First Half Year.)

Textbook: Montgomery's Leading Facts of American History. During the first half of the year complete the text to Chapter IV. This part of the book includes the story of the discovery of America, its exploration, the settlement and growth of the colonies up to the close of the French and Indian Wars, together with an account of the lives, customs, and civilization of the American Indians.

In teaching the chapters on the Discovery of America and on Exploration and Colonization, it should be made clear that from the beginning American History has been closely identified with the history of Europe; also, that the settlers who came here in the 17th century brought with them the ways of living and the inventions known to Europeans at that time. In this connection it would be well to try to estimate the value to mankind of such inventions as gunpowder, the mariner's compass, and the printing press, and compare them as to usefulness with more recent inventions like the steamship, the railroad, the telegraph, and the telephone.

Discovery of America: At this point it would be well to show how conditions in Europe led to the voyage of Columbus. Make a brief study of the Crusades and their effects on Europe; the commercial interests of southern Europe during the last half of the 15th century; eastern trade, means of travel, difficulties of the journey; the effect of the fall of Constantinople. Also, give some attention to the life and activities of some of the leaders in the movements which resulted in the discovery of the New World. If pupils are to get a clear un-

derstanding of this period, constant use must be made of maps and globes. As far as possible pupils should be encouraged to examine maps which show the ideas held relative to the size and shape of the earth at the time of the discovery of America.

Exploration: The lively, picturesque, and adventurous phases of life during this period appeal to children and furnish material well adapted to instruct them. In the study of this period show how claims of different nations to portions of the New World were based on discovery and explorations. As far as possible pupils should be made to understand the nature of the explorations, the objects and methods of the explorers, and the reasons for the success or failure in planting the colonies. Of course, such explanation involves some knowledge not only of the national traits of character of the Spanish, the English, the Dutch, and the French, but also the relations which existed among them as nations. Aim to have the pupils understand the significance of the various discoveries and explorations of the time and show how they influenced colonial history.

In studying the Indians aim to discover their influence on the early history of the country. Note the relation of the Indians to (a) the English settlements, (b) the French settlements. Account for the differences.

Colonization: The colonial period is of transcendent importance as the seed time of ideas and institutions. Note the conflict of ideas in Europe in the various lines that led to the migration and colonization in the New World. Note what ideas are most prominent in the different colonies, and observe that no one idea so completely triumphs over the others as to make them entirely subordinate, as had to be the case in Europe. Note also the character of the men who were leaders in the several lines of institutional growth. And especially observe the inter-relations of ideas and institutions; how, for example, in New England the church tinged with its coloring, the social, industrial, political and educational life of the people; how in New York business in a large measure controlled all other lines of growth; how in the South the social element was prominently active. But observe that by the time the colonial period merges into the period of union, all the institutional ideas are practically on a footing of equality.

Politically, the most important idea of this period is, perhaps, that of local self-government. Its growth and influence in each colony should be carefully watched. It accounts for numerous conflicts between the colonists and their royal governors, and in a great measure

explains the larger conflict that resulted in American Independence.

Before taking up the chapter on Permanent English and French Settlements it would be well to review briefly Raleigh's attempts to colonize the New World. Observe how his methods differed from those used later, and, if possible, account for his failure.

On page 42 of the text is shown the influence physical geography has had on the history of our country. This topic is important and should receive special emphasis in passing over it and should be referred to from time to time while studying other topics. Nowhere in the text is the relation between history and geography so clearly brought out.

After studying the main events in the history of each of the colonies, give special attention to the following typical colonies: Virginia, as representing the Southern group; Massachusetts, as representing the New England group; and New York, and Pennsylvania, as representing the Middle group. Other colonies, especially Maryland and Connecticut, should receive some consideration, as they both played a rather prominent part in the early history of the country.

Before beginning the study of Massachusetts the pupils should understand who the Pilgrims and Puritans were and why they came to America.

Compare Massachusetts and Virginia as to religious affairs, types of government, character of colonists. Show how life in each of these colonies was influenced by geographic conditions. A similar comparison may be made between the other colonies, as there is probably no better way of studying them.

In the general study of the colonies give attention to the different modes of government prevailing at different times, the introduction of slavery, representative assembly, the relation of the colonies to each other, and to the mother country. Show influences that tended to keep the colonies apart, others that tended to unite them.

French and Indian Wars. It should be carefully noted here that the two great European nations, France and England, are intensely jealous of the colonial development of each other and are anxious to possess the Hudson valley—the key to all the possessions on the Atlantic coast. Only the last of the series of wars between these nations should be studied intensively, as it was the only one in which all the colonies took part and the one which brought to a close the long struggle for the possession of the New World. It is also important because of the influence it had on the development of the English colonies.

"In studying the last great conflict between the French and English for colonial empire, we have an excellent opportunity to review broadly the whole course of colonial settlement by these two nations, to contrast the characters of the French and the English in America, and to get a clearer understanding of the quality of the English colonists as a whole. This is a very good illustration to show how the long series of historical facts summarize themselves in a single event."

In this war as in all others the results are more important than the military campaigns. Therefore, do not fail to emphasize those topics which show what the war settled and its results on the later history of the country.

Do not fail to make some study of the internal growth and development of the colonies during this period, as the life and activities of the common people are always an important part of a nation's history.

The Revolution and the Constitution: "A detailed description of battles and campaigns is profitable only to experts in military service, whereas the causes that lead a country into war, especially into a war for independence, are most important stages in the evolution of a people's political and moral life." Therefore, after a rather full study of the causes and conditions leading up to the American Revolution, dwell but briefly on the actual conflict. Only the significant movements should receive special consideration. Campaigns are more important than battles.

In the study of the causes of the Revolution, the personality of such leaders as William Pitt and George III in England and of Samuel Adams and Patrick Henry in America deserve marked attention. In the study of the war itself it will be seen that many of the most important events may be centered about the commanding personality of Washington.

Aim to have the pupils appreciate the significance of the Declaration of Independence and the Articles of Confederation. These documents are the expression of a great change in sentiment among the colonists. Make an effort to discover the causes of this radical change in public sentiment. From 1776 note the rapid growth of the idea of independence and union among the colonies. During the Critical Period of American history note the influences that tended to unite the colonies; also, those that tended to keep them apart.

In studying the breakdown of the Confederation and the adoption of the Constitution, be sure that the pupils understand the weakness

of Congress under the Confederation; the commercial war between the states; money troubles of the Confederation and the conflicting claims of the Northwest Territory, with the real result of their settlement.

If the causes of the breakdown of the Confederation are made clear, the pupil is prepared to understand why the Constitution was necessary. As steps leading to the adoption of the Constitution the following topics should be studied or reviewed: New England Confederation; Franklin's Plan of Union; Stamp Act Congress; Committees of Correspondence; First Meeting of Continental Congress; the Declaration of Independence; Adoption of the Articles of Confederation; Annapolis Convention; Constitutional Convention. If these topics are treated in the right way the pupil will not only understand the growth toward union, but also the causes of such growth.

At this point note carefully the character of the men who made the Constitution; the different plans proposed; compromises on the most important questions at issue; what the Constitution did for the country.

Before taking up the chapter on organizing the new government the pupils should draw a map showing the territory belonging to the United States after the ratification of the Constitution. They should also know something about the population, domestic life, social, political, and industrial life in this territory.

(Second Half Year.)

The Union and National Development. The expansion and development of our country under the Constitution is the theme of this half year's work. It will be observed that as we approach the more recent topics of our history the subject grows more and more complex and difficult. That means, of course, that the teacher must employ the best methods in presenting the material to the pupils. Many of the pupils are now completing their education for citizenship, in the common schools, and history should be so taught as to bring the children in touch with our modern problems and into sympathy with our present social and economic conditions.

In the short time allotted to it, it will be impossible to study thoroughly all the important events in this period. Therefore, it would be better to select the most important and most typical phases and events of the period and group about them such illustrative material as time and conditions will permit.

It will be observed that the time from 1789 to 1861 was one in

which the ideas of State and National supremacy were almost continually in conflict, and numerous compromises were resorted to as a means of temporary adjustment. These form a kind of backbone of our national politics during the time, and a tracing of them in all relations will cover a large part of history.

The following topics are suggested upon which to focus the attention: Organization of the government and finances; growth in territory; internal improvement; history and extension of slavery; leading inventions and inventors; immigration; the rise and influence of political parties; the three departments of our government; our system of revenue; our relations with other countries.

Most of the topics selected for this period have a continuous chronological, and causal sequence extending, in some cases, through the whole constitutional period. The growth of slavery until it culminated in the Civil War and reconstruction, is an illustration of this long-continued sequence of causally related facts.

EIGHTH GRADE.

(First Half Year.)

From the beginning of the Civil War to the present. Review briefly the course of events leading up to the Civil War. Compare the strength of the two sections as to population, wealth, natural resources, military training, strategic positions. Show attitude of the border states, plans of campaign, lines of attack and defense, and blockade of the Southern ports. Trace various campaigns noting principal leaders and successes of either side; trace the progress of the war on the sea; the final great campaigns; the outcome of the struggle; situation in the North, situation in the South. Note the losses of life and property of the war and its cost. Show the condition of the freed negroes. Call attention to the plans of reconstruction proposed, the readmission of the seceded states, the amendments to the Constitution, and the end of the reconstruction period.

Following the close of the Civil War is the period of national development. It is characterized by great expansion in industrial agencies, manufactures and commerce. The period is a very complex one, and perhaps the most difficult of all to teach satisfactorily. There is a great deal of legislation. The main topics for special attention are the laws regarding money and banking; the successive tariff enactments; the relations of labor and capital; the growth of corporations and trusts on the one hand and of labor organizations on the other, strikes, boycotts, lockouts, etc.; great increase in manufactures; industrial expositions; occupancy of public lands; organization and

admission of new states; rise of the doctrine of conservation of natural resources; irrigation of arid lands; establishment of forest reserves and reservation of water power sites; the Spanish-American War and the new position of the United States among the nations of the world as a result of it. These are some of the subjects which must be treated.

Teachers will doubtless find it an aid in presenting the work in history to divide it into periods which can be characterized by some general statement. Consult the Table of Contents as to what these divisions are in the text used. The following divisions taken from Adams & Trent's History of the United States may also be helpful:

1492 to 1765.—Discovery and Settlement.
1765 to 1789.—Revolution.
1789 to 1825.—Organization of Political Parties.
1825 to 1850.—Spread of Democracy and Extension of Territory.
1850 to 1861.—Eve of the Civil War.
1861 to 1869.—Civil War and Reconstruction.
1869 to ——.—Period of National Development.

Books Suitable for School Libraries.

McMurry—Pioneers of the Mississippi Valley.—The Macmillan Company.

Catherwood.—Heroes of the Middle West.—Ginn & Company.

Eggleston.—Stories of American Life and Adventure.—American Book Company.

Andrews.—Ten Boys on the Road from Long Ago.—Ginn & Co.

Fiske.—The War of Independence.—Houghton Mifflin Company.

Elson.—Side Lights on American History.—The Macmillan Co.

Guerber.—Story of the Great Republic.—American Book Co.

Franklin.—Autobiography.—Houghton Mifflin Company.

Hart.—Camps and Firesides of the Revolution.—The Macmillan Company.

Judson.—The Growth of the American Nation.—The Macmillan Company.

Coffin.—Boys of '76.—Harper Brothers.

Coffin.—Boys of '61.—Harper Brothers.

Caldwell.—American History Studies.—Ainsworth & Company.

Fiske-Irving.—Washington and His Country.—Ginn & Company.

Andrews.—The United States in Our Own Times.—Scribner's.

Hart.—Source Book of American History.—The Macmillan Co.

Sparks.—Expansion of the American People.—Scott, Foresman & Company.

Roosevelt.—Winning of the West.—Putnam.

Coneau.—Industrial History of the United States.—The Macmillan Co.

Brigham.—Geographical Influences in American History.—Ginn & Co.

Channing.—Student's History of the United States.—The Macmillan Co.

Jackson.—A Century of Dishonor.—Roberts Bros.

From a study of the history of the United States the pupil should gain a knowledge of the facts of the discovery and exploration of our country, of the settlement and growth of the colonies, of our separation from the mother country, and of the formation of our national government. It should enable him to trace our growth and development as a nation since our separation from Great Britain and to learn in what respects our development has been notable. Furthermore, it should explain prevailing conditions and institutions by showing how they have come about. This is our best way of understanding the present and of placing ourselves in a position to participate intelligently in the solution of the great problems of social and political betterment which it is the duty of all of us to face.

It is also to be hoped that the study of the history of our country and its great men will not merely acquaint the pupils with important facts, but will serve to develop in them a true patriotism and to cultivate those moral qualities which they see have made men famous and our country great.

The foundation for the study of history should be laid in the lower grades. This foundation work should not be entirely incidental, but should have a definite purpose which should be to furnish a body of facts and knowledge by which to interpret the new series of facts now to be presented; to train the imagination to construct mental pictures of events described, and to create an interest in the subject. If this preparatory work is done properly, the difficulties attending the first attempt at the study of history will be greatly lessened.

The approach to history in the lower grades should be through the story and through biography. The early interest of the child is not in history as a scientific study, but in the stories of heroic men and their noble deeds.

The pupil begins the acquisition of historical knowledge as isolated facts. He organizes these into series later, and constructs his philosophy of history last. He should observe carefully this order of development.

Cultivate the imagination; that is, make use of pictures and maps to assist the mind to image things which are described.

The recitation period in history should give time for the same classes of exercises as are essential in any other subject. These exercise may be termed (1) testing, (2) teaching, (3) preparation. The first part of the period may be given up to testing the class upon their work on the lesson assigned the day before. This test should be more than a verbal test. The second part of the period may be used by the teacher in giving new illustrations, citations, and statements to add to the knowledge of the class. The third part may be used in carefully going over the lesson of the following day, making clear just what is expected, what helps are to be used, and where they are to be found, and by giving such other suggestions and instructions as may seem necessary to enable the pupils to study the lesson intelligently.

The topical method is strongly recommended whenever it can be used. More attention should be given to subjects and less to paragraphs and pages. Events will thus follow in logical sequence and will "live before the pupils," instead of being disconnected and uninteresting facts.

From the beginning of the study of formal history in the fifth grade, constant use should be made of maps and charts. The maps may be made by the pupils themselves or outline maps may be purchased and filled in by the pupil. The teacher should be guided by his own judgment as to what should be put on the maps. Pupils should also study carefully the maps in the book.

All writers do not agree as to the importance of various facts and events, hence some material is found in some books that does not appear in another. It can be made a matter of interest for pupils to compare different books as to the material used and method of treatment. In fact the teacher should have more than one text on her desk and the pupils should be encouraged to consult them as much as time will permit.

Where teachers have no special preparation for teaching history they will secure valuable suggestions regarding its purposes and manner of presenting material by reading some one or more of the following books: McMurry's Special Method in History—The Macmillan Company; Methods of Teaching and Studying History (edited by Hall)—D. C. Heath & Company; Hinsdale's How to Study and Teach History— D. Appleton & Company; Mace's Method in History for Teachers and Students—Ginn & Company, Bourne's The Teaching of History and Civics—Longmans, Green & Company.

CIVIL GOVERNMENT

EIGHTH GRADE.

Material and Method.

Text: Peterman's Elements of Civil Government.

The study of civil government, or civics, has generally been regarded a dry, difficult subject, especially for girls. If such be the case we believe that method, not subject matter, is at fault, for in a republic such as ours the study of our relationships one with another in society should be extremely interesting. Teachers are expected to use the textbook in the teaching of civics, to be sure, but those teachers who depend wholly upon the text-book will come far short of meeting the possibilities of teaching civil government in our schools. The mere teaching of the text-book by assigning lessons and hearing the pupils recite what they have learned, or committed, without its application to actual government as found in the home, the school, the district, the town, the county, the state and the nation, will result in scant knowledge of the subject of civics.

For example, the statement, "The functions of the civil district are judicial and executive, and lie within a narrow range," will mean very little to the pupil. He must understand the meaning of "functions," "civil district," "judicial," "executive," and why they "lie within a narrow range." He must understand that he *lives* in a civil district, just what it is, who are its officers, how they are elected or appointed, what their powers and duties are, by whose authority they act and the *need* of a civil district as a means of government. If there happens to be a civil suit in the justice's court in the community, the class in civics should be allowed to attend the court so that they may see just what is done. By so doing they will learn more in an hour or two by observation than they could learn from books in a much longer time. If the school happens to be located in a town where there is a town council, the children should be allowed to attend some of the meetings of the council. It would be an excellent opportunity to learn how our schools are managed if pupils could attend a meeting of the board of education. Pupils should be required to make a written report of such visits, which reports may be

used as regular class work in language in addition to the discussions in the civics class.

The study of civil government should begin with the home, proceed to the school, then to the district, the county, the state and the nation. Fortunately the adopted text follows this order of treatment, but no teacher should be satisfied with teaching merely what is given in the text, because the textbook is only a brief general outline of the most common forms of governmental control found in this country. Of course, the national government is the same over all the states. But beginning with the school the pupils should understand thoroughly what constitutes the school, or sub-district, who are its officers, by whom appointed, how the teacher is appointed and the duties and powers of both the trustees and the teacher. Are there any other officers in this, the smallest governmental district?

Town or City.

What is an incorporated town or city? How may a town or city become incorporated? What control does the state exercise over incorporated towns and cities? If you live in an incorporated town or city, name all the officers of the town or city government. What is an independent school district? How may an independent school district be created? What special privileges does such district usually have?

Magisterial District.

Then the class should begin the study of the magisterial district. Note that the magisterial and school districts are the same. How many school or magisterial districts in the county? Who constitute the board of education? How do they get their office? What are their duties? The length of term? Who is the truant officer? What are his duties? How appointed? Who are the justices of the peace and constables? How elected? Their duties? Term of office? Are there any other officers in the magisterial district? From what sources are the school funds derived? What is the taxable valuation of the district? What rate of levies is laid on this valuation? How much money is raised? What is the total cost of running the schools of the district? The total cost of maintaining your school? Are any other levies made upon the district, and if so, for what purposes?

The County.

Name of the county officers. How are they elected? What are the duties of each? How is the county court elected? What are the

duties of the county court? What levies are made by the county court? The rate of these levies and the amount of county funds raised? For what purposes are these funds expended? To what extent does the county exercise control over the schools? How are the roads in the county maintained? Is there a county health officer and if so who is he? How does he receive his appointment? What are his duties? Suppose the county needs a court house or a bridge, whose duty is it to provide these?

The State.

Names of the state officers. Which are elected and which appointed? If appointed, by whom? What are the duties of each state officer? Learn how the following boards are elected or appointed, who constitute these boards, their term of office and their duties:

The State Board of Public Works; State Board of Regents; State Board of Control; State Board of Education; Public Service Commission; State Board of Pharmacy; State Board of Health; State Board of Public Accountants.

Name and give the location of each of the state institutions. Under whose control is each of the state institutions? What is the purpose of each? What is the financial cost of each to the state?

The State Legislature.

What is the State Legislature? How many senators and how many delegates? How are these senators and delegates chosen? How many delegates from your county? What counties constitute your senatorial district? Who are your senators? How often does the State Legislature meet? What are its duties?

Judicial Circuits.

How many judicial circuits in West Virginia? What county or counties constitute your judicial circuit? Who is your circuit judge? What are the duties of the circuit judge? What are grand and petit juries and what their duties? Does your county have an intermediate or criminal court? If so, who is the judge and what are his duties? Who constitute the state supreme court? What are their duties? Are they elected or appointed and by whom?

Federal Courts.

What control does the United States exercise over West Virginia? Name of the federal officers assigned to West Virginia. Of what federal courts is West Virginia a part, and who are the judges? Are these judges elected or appointed, and if appointed, by whom?

Postoffices.

Under whose control are our postoffices? How are postoffices classified. How many first class postoffices in your country? How are post masters appointed? Does the state have anything at all to do with postoffices? Who bears the expenses of postoffices? What are the rates for sending various classes of mail through the postoffices? What is the parcel post?

The United States.

What has been given relative to district, county and state government may be applied by the teacher to the study of United States government. The object of all this study should be to familiarize the pupils with what is actually done, making the study as practical as possible so that the pupils will not be content with merely learning forms of government.

Teach Civics in Terms of Everyday Life.

The teaching of civics should lead the pupils to understand both their civic environment and their civic duty; that is, how government of whatsoever sort affects them personally and at the same time how they are expected as young citizens to contribute to the general welfare of the group, the community, the district, the county, the state and the nation. They should be led by skillful teaching to see that government as expressed in laws is but the statement of the ordinary rules of conduct towards civil authority that they are expected to observe in the home and in the school; that is, that obedience to law is nothing more nor less than the observance of common manners and morals in every day life, as applied to government of larger groups. Rules and regulations in the home and in the school are usually oral, their enforcement is by the parents or the teacher. Laws are written rules and regulations for the larger group, their enforcement by civil authorities.

As an introduction to being good citizens the civics class should not only be made acquainted with what government does, as suggested in the first paragraphs of this outline. They should also become familiar with what government does *not* do. For example, the pupils should study the school to see wherein it falls short of what it ought to be. Wherein is the school weak? Is it weak for lack of funds? Is the board of education at fault? Wherein do the laws of the state handicap the progress of the school? What could the pupils themselves do to improve the school? Why do some children fail to attend school? Who is at fault? What are the requirements

of the Compulsory Attendance Law? Should there be a medical inspector appointed? Why? Would the results justify the expense of maintaining a medical inspector? Take another example: What is the condition of the roads? If poor, why? Who is responsible for maintaining passable roads? Who bears the expenses of improving roads? What would be the cost of building good roads in your community? What financial gain would come from maintaining good roads. Does the county or the state aid the district in maintaining good roads? To what extent? How may this aid be obtained? What responsibility do the citizens have in improving roads? What may the pupils do?

After this manner the teacher may work out in detail the various other problems that confront the people in improving conditions generally, not only in the local communities, but also in the county and in the state. Such teaching will acquaint the children with actual conditions and also with ways and means of improving these conditions. The children will discuss these questions with their parents, thus making them better citizens, and the children themselves will grow up to become much better and more intelligent citizens.

The study of civil government with a textbook begins with the eighth grade and extends through the year, the class reciting three times a week. The major part of the time should be given to Part I and to the Supplement on History and Government of West Virginia. The study of the United States Constitution should be deferred to the high school. Pages 227-235 should be omitted entirely, since all pupils study State History as a separate subject.

STATE HISTORY

EIGHTH GRADE.

General Directions.

Text: Lewis' History and Government of West Virginia.

Suggestions to teachers:

1. State history should be taught only in the second half of the eighth grade.

2. Select the essential facts of West Virginia history and teach these thoroughly.

3. Correlate state history with United States history and civil government wherever possible to do so.

West Virginia is yet in her youth. She has not made enough history to merit a full year's study by elementary grade pupils. Heretofore, a great deal of time has been wasted in the study of the lives of men of no great historical importance and in the study of events and dates that have had little bearing on West Virginia history. Since all eighth grade pupils study civil government, that part of the text from page 274 to the end need not be considered at all.

The teacher should be the judge as to what part of the text, pages 1-274, should receive emphasis. She must select the topics which have the greatest historical significance and then supplement these by references to other books and to other sources of information, such as local records and state documents.

Chapter I may be studied in connection with state geography. Chapter III may be omitted, since this information can be obtained in connection with United States history. Only the most important events outlined in Chapters IV and V should be studied. Chapters II, VI and VIII should be studied as a unit and correlated with United States history. Chapters IX to XIV inclusive should be studied in connection with United States history, or as a review of such events of our national history as have affected the history of West Virginia.

West Virginia history really begins with Chapter XVI and extends through Chapter XXV. However, even these chapters have many events and items recorded that are of small historic interest or value. The aim of the teacher should be to teach the pupils what

conditions led to the formation of West Virginia as a separate state, what made its formation and admission possible, and how it organized a separate state government, all of which must be closely correlated with United States history at the time of the Civil War.

The history of any state is for the most part merely incidental to national history. By reading the text carefully you will note how true this is in the case of West Virginia. Hence, the importance, even the necessity, of correlating closely state history with United States history.

Take, for example, Chapter IV of the text, Exploration and First Permanent Settlement. The events outlined in this chapter will have little meaning to the class unless they are led to understand that what happened here in West Virginia was only a part of a single great movement—namely, the extension of white settlements westward all along the eastern coast of the colonies. Or, when the class study the Indians, and the struggle of the white man in driving them farther and farther westward until after the great battle of Pt. Pleasant they gave up further attempts to occupy West Virginia territory, unless the class understand thoroughly that this struggle of the white men of West Virginia with the Indians was merely a part of the general movement all along the eastern border of the colonies to drive the Indians westward so that the white men could possess the lands then occupied by the Indians, the pupils will not get an exact conception of what was going on even here in West Virginia at that time. Furthermore, it is impossible to lead the pupils to a correct understanding of the situation which made West Virginia a separate state unless the class correlate their study at this point closely with United States history.

Since June 20, 1863, West Virginia's history may be best studied by grouping all events under two main lines of development—industrial and educational.

If the study of our state history is directed as indicated here, the children will be enabled to learn much more in much less time than heretofore.

PHYSIOLOGY

FIRST, SECOND, AND THIRD GRADES.

Time: Fifteen minutes once a week at the nature study period.

Course: Simple facts concerning the body, its growth and care, divided into topics as follows:

Note: Teachers wishing information on these topics will find at the end of each topic the chapter or page designated in Hygiene and Sanitation—the adopted text.

The Body.

Composed of flesh, nerves, and bones. Location, name and use of the chief parts and organs—head, brain, trunk, heart, lungs, stomach, etc.

Principal uses are motion, respiration, nutrition, excretion and sensations, or to enable us to move, breathe, eat in order to grow, to cast off impurities, and to hear, see, feel and think. Chapter II Primer of Hygiene.

The Growth of the Body.

In order that the body may grow it needs good food, pure air, pure water, exercise and rest.

Develop these in the order given and contrast good and bad foods, etc., so as to make clear to the child the necessity of each. Chapter III Primer of Hygiene.

General Note to the Teacher.

Though the work is here definitely outlined it does not preclude the teacher's giving hygienic instruction when the opportunity presents itself.

Examples: Headache caused by late hours. A sick stomach caused by over-eating.

Should a pupil come to school with wet feet, the teacher should not only see that this condition is removed, but show the bad effects of same. Or,

Should a pupil accidentally cut or tear his flesh, the teacher should not only be able to dress the wound properly, but make this an occasion for an object lesson for the school.

Food and Its Uses to the Body.

Talk about the necessity of food for growth and repair; cause of hunger; digestion, absorption and assimilation of food; how to aid digestion; importance of such foods as milk, eggs, bread and butter, meat, fruits, vegetables, salads, oils and nuts; dangers of tea, coffee and alcoholic drinks; unsanitary soda fountain and drinks.

Hygiene; need of eating slowly and chewing thoroughly; why we should not over-eat, especially of such foods as pie, cake, candy, pickles, etc., of green or decayed fruit, of tainted and adulterated foods; regularity of eating, sleeping, studying, movement of the intestines to get rid of waste matter, neglect of which may cause appendicitis and other intestinal trouble. Chapter III and VIII, Primer of Hygiene.

Care and Preparation of Food.

The Care of Milk: Why milk delivered in bottles is cleaner than milk delivered in cans; why it should be cooled and kept cool; need for cleanliness at the dairy; how to keep it clean and pure at home; how eggs, butter, meat, bread, berries and fruits should be handled and kept; why food is cooked; why fried foods are not the best; why simply prepared foods are best. Chapter V and VII, Primer of Hygiene.

Our Meals and When to Eat.

Breakfast: Fresh fruit (apple, orange, bananas), some cereal with milk or cream, eggs, toast and a glass of milk; bread and coffee are not sufficient, the latter being injurious to children.

Noon Meal: Lettuce, egg or meat sandwiches, fruits, nuts, milk chocolate or cheese make an appetizing and nutritious lunch; a lunch containing much pie, cake, pickles, etc., is not a good one.

Evening Meal: Soup, meat or fish, bread, vegetables, fruit, with ices or light pudding for dessert, make an excellent dinner.

Strong, healthy and beautiful bodies depend largely upon the right choice of food at daily meals.

Do not eat between meals to keep from getting hungry. Wait until you are hungry.

Necessity for clean face and hands when eating.

How to care for the dishes; proper method of washing dishes. Chapters V and VIII, Primer of Hygiene, and chapter XXX Primer of Sanitation.

Pure Air and Its Use to the Body.

Why we need a constant supply of air; out-door air the best; ways of ventilating occupied rooms to secure pure air; why the air in an unventilated room is not pure; the need of a thermometer; why the heated room should be kept at from 65 to 70 degrees; why air should not be allowed to become too dry.

The need of keeping the windows of one's sleeping room open at night. Pure cool air is a great aid in keeping good health and good appearance.

Breathing.

Correct position best for breathing and for good appearance as well; why breathe through the nose and keep both nostrils open; the value of exercise to improve posture and increase lung capacity; harm from tight clothing; why over-exertion, such as long runs, and violent exercise is not good for the growing child. Chapters X and XI, Primer of Hygiene.

Water and Its Use to the Body.

Necessity for pure water; why the body needs plenty of water; when drinking water should be boiled; why drinking much at meals is not advisable; why it is needful to bathe and when; use of soap; hot water bottle and its use in relieving pain; necessity for individual drinking cups. Chapter XX, Primer of Sanitation.

Care of the Body.

Uses of the skin, hair and finger nails and care of each. Chapter XV, Primer of Hygiene.

Teeth: Value in preparing food for digestion; causes and cure of irregular teeth; causes of decay; when and how to clean the teeth; necessity for taking care of the temporary teeth; the first permanent teeth; why the teeth should be examined by the dentist and filling done at least twice a year. Chapter IX,, Primer of Hygiene.

Eyes: Ways of protecting the eyes; evidences of the need of glasses; why spectacles are preferable to glasses; care of glasses; examine for trachoma. Chapter XXIV, Primer of Hygiene.

Ears: Care of, common injuries to; signs of defective hearing; why consult a physician when symptoms are recognized. Chapter XXV, Primer of Hygiene.

Clothing: Kinds and advantages of each; differences for cold and warm weather; need for underclothing; kinds and advantages; need for rubbers in wet weather, should not be kept on while indoors; im-

portance of keeping the body dry and free from colds. Chapter XVI, Primer of Hygiene.

Cleanliness: Necessity for clean homes, clean yards, clean streets; why rugs are better than carpets; advantages of vacuum cleaner and moist cloth for dusting; vigorous health the best preventive of any disease; how the house-fly spreads disease and how to combat it; dangers in handling the dirty cat or dirty dog. Chapter XXIX, Primer of Sanitation.

Accidents: What to do in case of cuts, bruises, burns; why cuts should be cleansed and covered; danger of scratching off scab with finger nails; necessity for using clean cloths; possible danger from rusty nails; what to do if clothing catches fire; why boys and girls should learn to swim; dangers from electric wires; danger from dog bites. Chapter XXVI, Primer of Hygiene.

Accidents and Emergencies.

In every schoolhouse there should be the following emergency outfit and every teacher should know how to use its contents. The remedies should be placed beyond the reach of anxious children.

4 oz. bottle of camphor.
4 oz. bottle of arnica.
4 oz. bottle of witch hazel.
1 oz. bottle of collodion.
1 pair of sharp scissors.
Package of absorbent cotton.
Roll of clean linen or soft cotton for bandages.
Sheet of surgeon's rubber adhesive plaster.
Needle and thread.

An antiseptic plaster or dressing for a wound may be made as follows: After cleansing the wound thoroughly with *cold* water, put enough of the absorbent cotton over the wound to cover it completely. Drop collodion on the cotton until it is saturated. With the fingers press the cotton gently but firmly upon the wound and let it dry there. This is one of the most satisfactory of antiseptic plasters. A clean linen or cotton bandage may be wrapped about the wound if it is severe.

Exercise, Rest and Sleep.

Exercise: Why needed, kinds and advantages of out-of-door exercise.

Rest and Sleep: Why needed; illness often avoided by taking regular and proper amount of sleep; best time to sleep; amount of sleep;

why students should not keep late hours. Chapter XX, Primer of Hygiene.

The joy of health and strength, happiness and satisfaction, ability to look, do, and be our best.

Health and strength the natural result of the wise use of food, air, water, exercise and rest; individual responsibility of clean, pure, healthy bodies. Chapter XXXII, Primer of Sanitation.

Suggestions on Exercise.

It is impossible to outline a course on physical exercise within the space allotted here, but it is suggested that the teacher make a special effort to enter into and direct the play of her pupils. Especially should the teacher be prepared to direct the play on rainy and bad days when the pupils must stay within doors. The teacher also needs the exercise. She can do better work together with her pupils after participating in a game that calls into use the muscles of the body.

There are many indoor games which are full of action. See to it that the children get some vigorous play at the recesses and at such other times as the teacher thinks best.

For a complete list of indoor as well as outdoor games with complete instructions for playing, see "Games for the Playground, Home, School and Gymnasium," by Jessie H. Bancroft. Price $1.50. The Macmillan Company, New York. Or, Johnson's "What to Do at Recess." Price 25 cents. Ginn & Co., Boston.

As a rule the calisthenics given in the school room is not enjoyed by the pupils and is of very little benefit to them. Play is the natural exercise for the child. Chapters XVII, XVIII and XXVII, Primer of Hygiene.

FOURTH GRADE.

The Ritchie-Caldwell Primer of Hygiene is introduced. The text adopted has Primer of Hygiene and Primer of Sanitation bound in a single volume. The fourth year's work should cover the first twenty-one chapters, or pages 1-102 inclusive.

One lesson a week should be given at one of the nature study periods, and it should be given on the same day each week.

The pupil need not be required to purchase a textbook, but the teacher should have one.

The teacher should be so familiar with the subject matter that she can lay aside the text and give a talk or conduct an oral lesson.

Supplement the text from other sources when possible. Make the

work as concrete as possible by demonstrations. Have the children participate in these lessons.

The textbook is simple and suggestive as to the method of presentation, so that the teacher can follow its plan without further suggestions.

Try to have the pupils practice what they find out to be necessary in order to be strong and happy.

FIFTH GRADE.

The Primer of Hygiene should be completed in the fifth year, Chapters XXII to XXXIV, pages 103-179 inclusive.

One lesson per week at the period assigned to nature study.

Whenever references are made to parts of the body, or other things which the child may not understand, the teacher should make careful explanations.

SIXTH GRADE.

Primer of Sanitation is the text. First half year, pp. 1-100, second half year, pp. 100-194. One lesson each week.

Care should be taken here, as before, that pupils have an opportunity to see pictures, drawings, diagrams, etc., that will help to make clear the subject matter. When possible bring in objects illustrating the lesson or take the pupils out to observe sanitary or unsanitary conditions. Have the pupils make observations and investigations and make written reports.

The aim is to get the pupil to apply the principles learned so that his health and that of his associates at home and elsewhere will show improvement. Stimulate the desire of the pupil to be well, to apply hygienic principles to his own living, so that it will result in fixed habits of right living.

EIGHTH GRADE.

Ritchie-Caldwell's Human Physiology, complete, five times a week.

Topics that are already understood from the lessons of the two Primers should be given less time, otherwise the book cannot be completed.

A fairly strong drill on anatomy and physiology as given in the textbook should be required.

It is very desirable that the teacher should be familiar with some more comprehensive texts on the subject.

Pupils from the seventh grade may be allowed to take this work, thus eliminating physiology from this grade every other year.

DRAWING

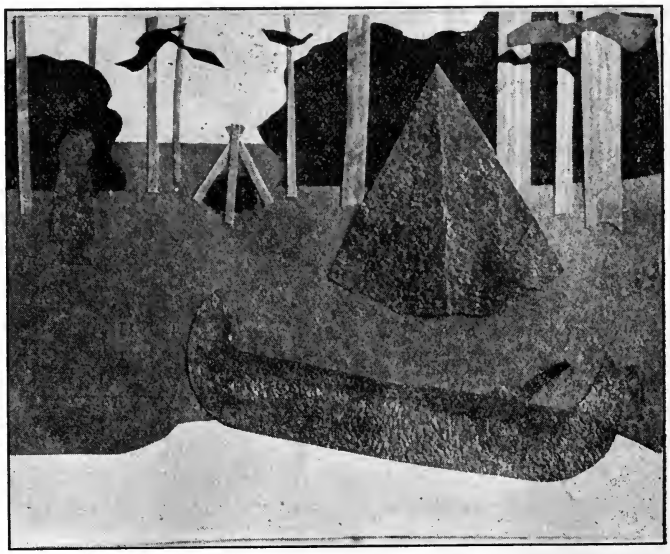
GENERAL DISCUSSION.

Aims and General Methods.

The aim of art in the elementary school is to afford esthetic and artistic development, which involves the appreciation of art as well as expression. Since art, from its very nature, expresses the interest of the artist, the subject matter and method must grow out of the organized life and experiences of the individual school.

The planning of a course of art instruction will involve such questions as age, motive, subject matter, method, technique. The first four may be left to the school, or the teacher, but certain phases of art expression must be emphasized throughout the grades so as to insure continued growth and satisfactory control.

Rules and principles have no place in the primary grades. Do not expect accuracy or try to force it. The chief purpose of drawing for children is accomplished if the work develops facility in expressing ideas, a ready response of the hand to the thought. This is gained only by much drawing.



First Grade Poster cut from Samples of Wall Paper.

A well balanced course of study should include (a) Representation, (b) Construction, (c) Design. For convenience we will treat these separately, although they may be closely correlated in teaching.

Representation: Should include:

(a) Drawing from type solids and common objects of similar shape.

(b) Theory of perspective.

(c) Drawing from memory and dictation.

(d) Drawing from plant and animal forms.

(e) The principles of arrangement.

Representation includes the study of the appearance of objects in regard to size, form, proportion, position, texture, tone and color, also such qualities as growth, construction, and action. Its aim is to cultivate accurate observation and memorizing of common forms in their ordinary positions and surroundings.

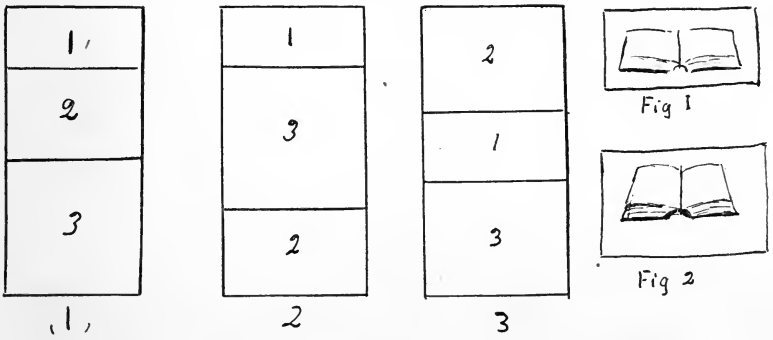


FIG. 1. INCORRECT SPACE RELATIONS OR ARRANGEMENT.
FIGS. 2 & 3. CORRECT SPACE RELATIONS AND ARRANGEMENT.

The problems involve the foreshortened circle and the perspective of surfaces.

Design: The purpose of all design in its broadest sense is twofold: It must produce an article and make it as beautiful as possible.

Construction: This branch of the subject in the elementary school should be confined to the planning of a few simple objects of interest and use to the child, such as a pencil box, bird house, envelope, book cover or booklet.

The accurate use of the ruler should be taught—appropriate and beautiful shapes and proportions—materials.

FIRST GRADE.

Representation: In plant life observe the simpler types of trees, such as the maple, apple, cedar, poplar. Compare their shapes and

proportions. Study leaves of the peach, apple, nasturtium for their form and proportion. Study plants and grasses for their direction of growth; study flowers of simple construction, for form and color; study also fruits and vegetables, for form and color.

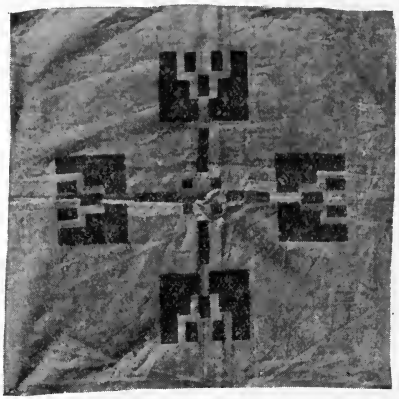
Animal drawing should include the general characteristics of animals: Shape of body, head, feet, tail, ears, nose.

In drawing the human figure begin with the manikin, or "stick man." In this, proportion of the body and action are represented. Follow with poses illustrating action, walking, running, jumping. Illustrate games and stories with these illustrations.

Construction: The problems in this grade should involve measuring to the inch. The subjects should be simple articles for the playhouse, to be done in paper folding, without pasting.

Booklets may be tied together, and mats woven and folded into hair receivers, handkerchief cases, etc.

The Progressive Drawing Books are rich in material and directions for this work.



CONVENTIONAL DESIGN FOR CUSHION.

For an illustration let us make a handkerchief case. First lead the children to determine the size: six inch; shape, square. Take a square piece of paper, find the center, fold each corner to the center which may be found by fold on the diagonals. Now estimate the size of the square of material required to make it. Use plain material, such as cambric, linen,chambray of grayish color and not too dark. Cut it the desired size and mark off each inch around the edge. (This is to space it for the decoration, which may be done by stick printing, cross stitch, or an embroidered dot.)

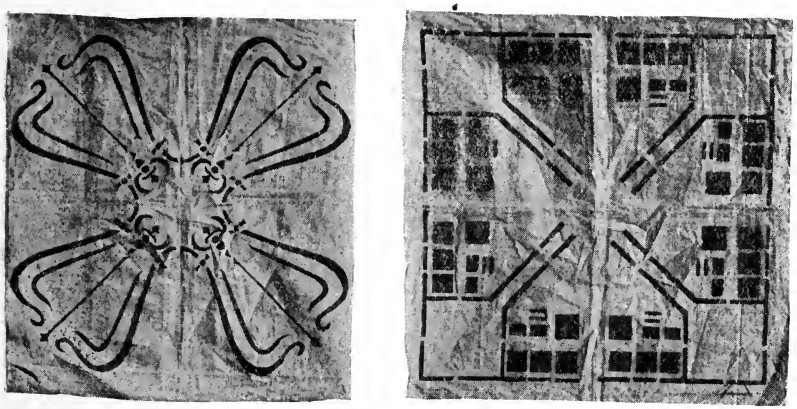
If you are teaching sewing, this will afford a lesson in hemming and cross stitch.

Decorative Design: Measure inch spaces for borders. This may be done both by folding and by measuring with the ruler. Units to be placed at these measurements or in spaces between may be spots of any shape, straight lines, or nature forms.

SECOND GRADE.

Representation: This should be a continuation of first grade. Lead the child to more accurate representation of objects, but the type of objects should be kept quite as simple and no more problems added. Let the composition work be simply the selection of paper, the correct size and shape for the object to be drawn.

Construction: This work may be the same as the first year, with the addition of half inch measurement. Instead of the handkerchief case, an envelope or folder for drawings may be made in a similar way.

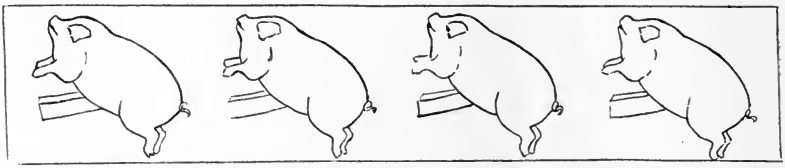


DESIGNS MADE BY FOLDING PAPER AS IN THE DIRECTIONS FOR BOOK-ENDS.

The amount of work and the variety will not depend on the number of things taught, but on the kind of school and the interest taken by the teacher. A few essential things well done with lots of drill and variety of application will be worth far more than an abundance of unrelated things that make merely a showing.

Design: Continue borders; using simple units in "repeat" patterns. Try to get an orderly arrangement. The units must not be crowded in nor yet too far apart. The border must be kept in good proportion, that is, in relation to the size of the object to be decorated. It must show that it is a border and not an "all over" pattern. Sim-

ple, straight-line letters may constitute the entire decoration of some of the book covers.



UNIT FROM NURSERY RHYMES SHOWING THE SIMPLE REPEAT BORDER. GOOD SPACE RELATIONS AND RYTHM.

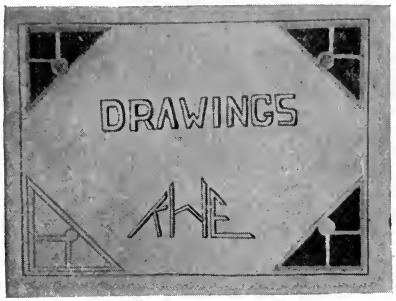
One of the primary colors or any one of the standard colors (red, yellow, green, blue, violet) may be used with a gray (not too dark or too light) of harmonious tone.

(Use border of pigs, suggesting unit from nursery rhyme, and illustrating good spacing and rhythm.)

THIRD GRADE.

Representation: In plant life study characteristics of growth and the relative size of parts, tones. Show dark, stem and leaves with lighter flower. The same subjects should be used as in first and second grades, but varying with the interests of the class.

Construction: Teach accurate measuring to the half inch. Plan articles to be made that will involve the half inch. A booklet with the cover to extend beyond the pages one-half inch, or a box for pencils with one-half inch lap to be pasted at corners.



SUGGESTIONS FOR BOOKLETS.

Children can in very early years be led to exercise judgment in the selection of appropriate materials as well as size, shape and proportion. Even though all these be dictated by the teacher, the child can be led to see why they are chosen.

Design: The problem for decoration in grade three should be a surface pattern for the box and book cover. Select a material of

soft gray color or a neutral. Decide upon the space to be decorated and mark the entire space with dots one half inch apart. Place the

A Well Balanced Calendar.

unit in alternating squares, or upon each alternating spot. Use only one color with gray or two tones of one color.

FOURTH GRADE.

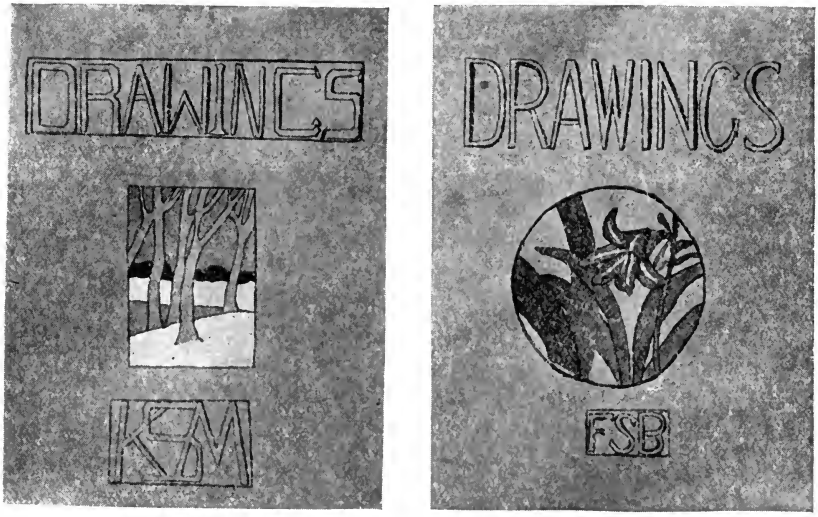
Representation: Study plant life for the appearance of form. Draw in large masses plants showing turned leaves and flowers representing them just as they appear.

Type solids and similar objects may be drawn for form and proportion in two dimensions only, pleasing shapes of bowls and vases may be used. These may show light and dark against a background of a third tone.

Tones in landscape may be studied. Draw sky light, ground middle tone with dark trees. An outline of good composition may be given to the class from the board to be worked out in flat washes.

Construction: Measure to one-fourth inch and the foot. Measure the room, articles of furniture. Teach the symbols for foot (′) and inch (″). Drill in measuring accurately with the eye.

A nice problem for this grade is construction of frames for weaving. These should be of card board, with notched ends or holes



EXAMPLES OF THE DECORATIVE LANDSCAPE AND PLANT.

punched, or of wooden frame with tacks at each end. The article to be woven will determine size and proportion. If sufficient equipment can be had, kites or sleds may be planned.

DECORATIVE PAGE SHOWING PROBLEM IN ADAPTING A FLOWER STUDY FROM NATURE TO A DECORATIVE COMPOSITION.

Design: The design in each grade is to be closely related to representation and construction. If the class is interested in weaving, the problem may be matching colors to be used, and border ends for rugs

or mats; bags for books or change. Again use a grayish color for the body and brighter colors for the stripes.

Decorative landscapes or flowers to be used in decorating the booklet, calendars or cards may be made. For the landscape, select a composition of few elements: sky, ground, trees, but with good lines and space relations. Paint in flat tones with water color or crayons. This may be done in two or three tones of gray or of one color. If all the forms are outlined with a dark uniform line, called the "decorator's line," the work will be more effective.

FIFTH GRADE.

Representation: In plant life continue the observation of form proportion, relative size of parts. Introduce in outline the character of joints, bracts and sheaths. Flowers and trees may be drawn, showing individual character: flowers and leaves may show for shortened position; trees may show character of branching.

Object drawing should involve the study of the circle at different elevations and positions. Type solids should be used first, then similar objects without handles, spouts, etc. Large objects should be used and exercises or "seeing" lessons before attempting to draw.

Construction: Make a working drawing for an object of two dimensions: a calendar or book cover, blotter pad, portfolio.

Design: This work may be a continuation of grade four. If you select the decorative flower and landscape, vary the work just enough to insure interest. It is quite hard enough to adapt the arrangements used to be colored. If you know color well, the complimentary colors could be introduced, as orange and blue for an autumn scene or gray blue background for a yellow chrysanthemum.

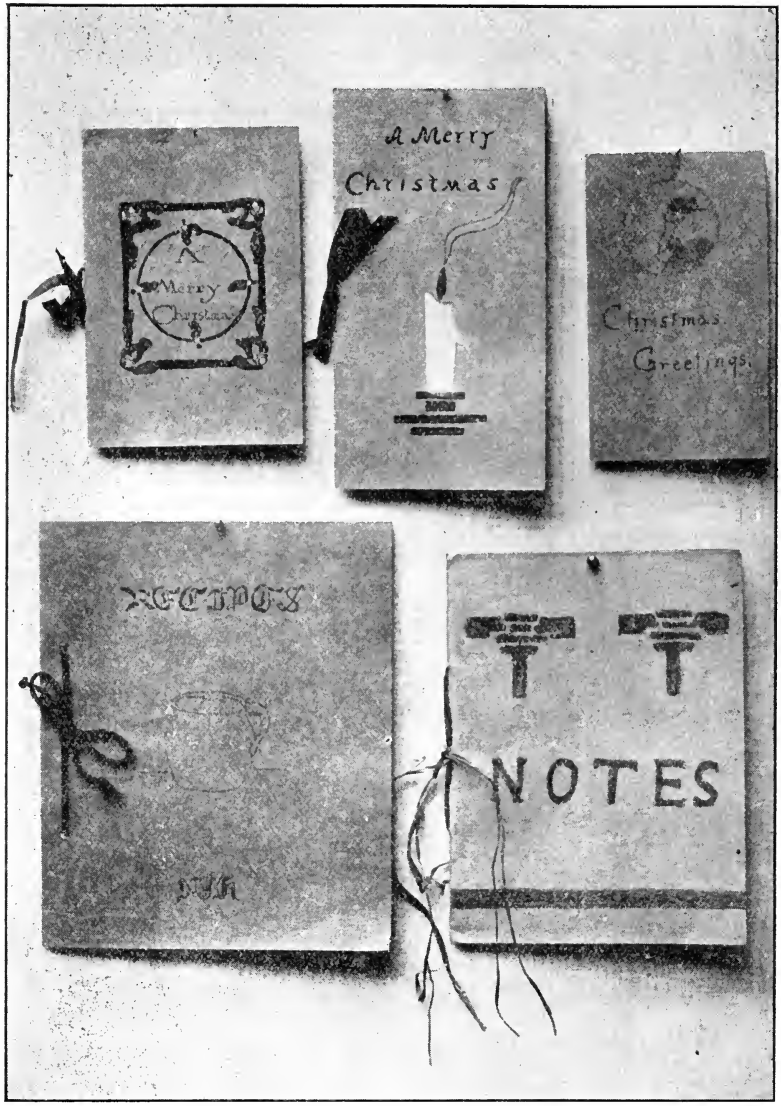
SIXTH GRADE.

Representation: Continue plant life from the fifth grade, introducing "accent." Work for quality of line in pencil, keeping the lines in gray tones, accenting where the shadows appear. Shade the leaves and flowers.

In object drawing, look for shadow on the object, also the cast shadow on the table by its side. Remember it is foreshadowed as well as the circle, and always represent it with a horizontal stroke.

(Use drawing of rose to illustrate, quality of line, accent, shading and position on paper. A simpler type of flower could be used, however.)

Construction: Measure to one-eighth inch. Draw to scale. Con-



A Number of Ways to Tie and Decorate a Booklet.

tinue the work of grade five, insisting on more and more accurate drawing.

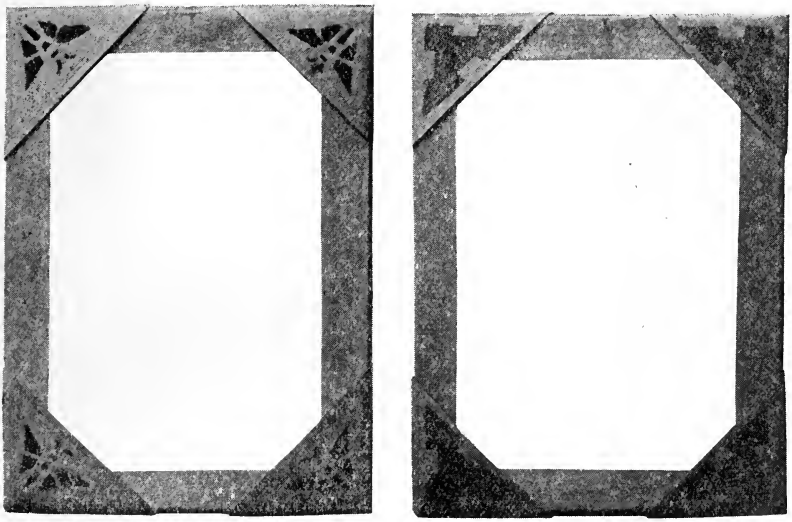
Plan a box or bird house and make a drawing of each side on a small scale. A portfolio or book cover could be planned and drawn to scale.

Plans for these may be dictated by the teacher or designed by the pupils, depending upon the amount of time given to the subject.

Design: Continue the work in decorative arrangement to be applied to the special interest of this grade.

Conventional units may be adapted to corners for portfolio. Leaves are perhaps the simplest subject, but remember to subordinate all detail and proportions to the shape of the space to be decorated. Excellent directions for formal decorations for corners by paper cutting are given in the Prang Books.

A more formal study of lettering may be taken up in this grade. Teach correct spacing and unity. Often an object well lettered is far more beautiful than one too elaborately decorated.



A Variety of Corners Designed by Folding and Cutting the Triangle.

Monograms and personal marks can be made by changing the proportions of the initials to fit different proportions of the rectangle, circle and triangle.

SEVENTH GRADE.

Representation: Continue practice in outline drawing, strengthening the work with accented lines where necessary. More complex forms may be introduced giving a special study to spouts, handles and rims. Where a great deal of time is given to drawing, and equipment may be had, a study of the arch could be incidentally intro-

duced. Form and proportion must be continually kept in mind. There should be no drawing of details without a correct foundation.

Construction: Without tools, objects of the same construction as in grade six, or articles involving the circle, such as lamp and candle shades, may be made. These may be constructed of heavy paper, or card board with the decoration cut out and lined with thin material or oiled paper.

Old Harper's Ferry Rifle. Suggestion for History.

The introduction of tools, the compass, tee-square, and triangles should be made here, and the lines of the working drawing well understood.

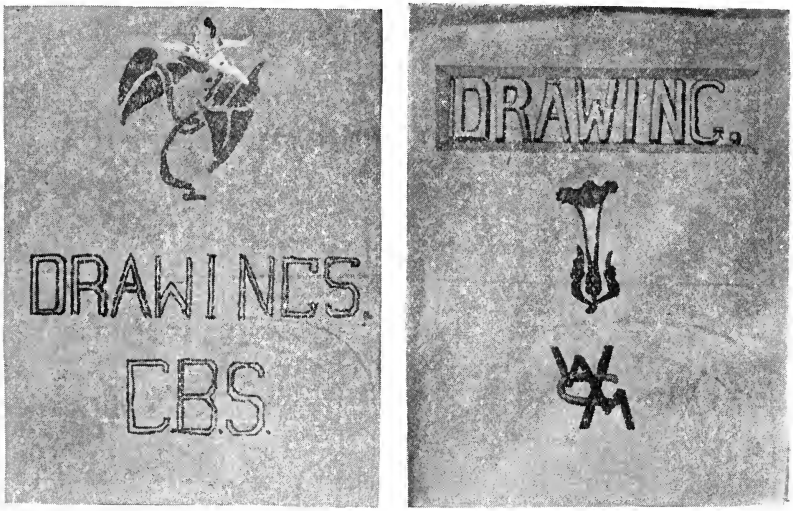
Design: Make a neutral scale with about nine steps from black to white. These will be named white, high-light, light, low-light, middle tone, high-dark, dark, low-dark, black. In making your decorations, select harmonious tones from this scale. Use both neutral washes and monochrome.

A Suggestive Poster.

See How Many Things can be Made from the Same Arrangement.

Make flower composition in silhouette. Make studies of vases and bowls arranged in circular or rectangular frame and painted in flat.

washes of gray, or monochrome. These arrangements can be adapted in panels and borders to the candle shades.



Adaptation of Flower Forms to Decoration.

EIGHTH GRADE.

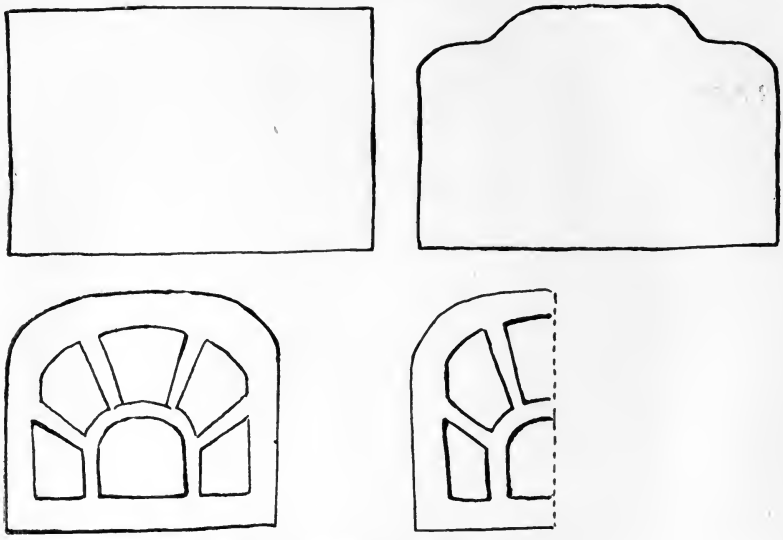
Representation: If the pupils in this grade have had sufficient experience in the principles planned for the lower grades, they may be given more freedom and variety. Plants may be studied for their beauty of line and form, with close observation and rendering of color and texture. However, the rendering of texture is more easily taught in drawing the tree. Compare the bark of various trees. Compare the texture of the trunk with the mass of foliage.

Construction: Continue the work of sixth and seventh grades. Become more familiar with tools and more accurate in execution. Experience in designing objects to be made may be the special work of this grade. Forms for pottery and basketry or anything to be made in the manual training shop are good.

The book-end and paper knife offer an opportunity for individuality. The paper knife is made of any wood not too hard to whittle. To develop the design, make a few sketches on paper or cut patterns directly with the scissors. Decide on a definite size, then proceed with shape and proportions. Try a variety of lengths for handle and blade, then more subtle variety in the contour of the handle.

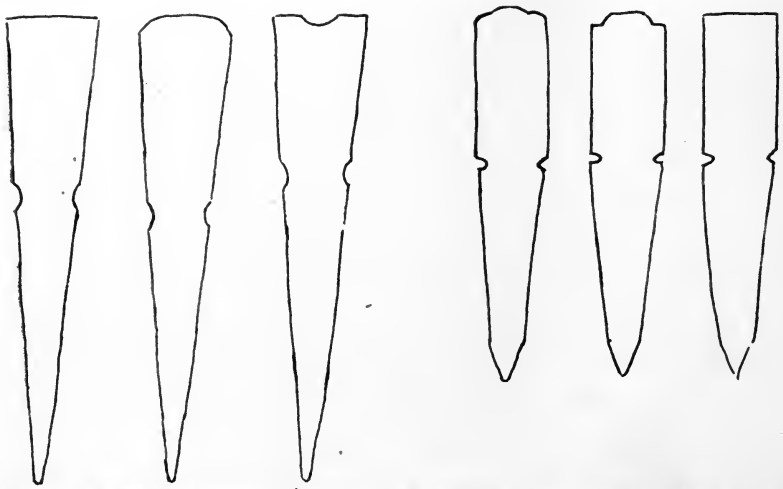
A pair of book-ends are made from a piece of tin, oblong in shape,

bent at right angles so that about two-thirds of the length will stand upright. The shape and proportions and contour may be determined by the pupil. These same principles and problems are involved in the



BOOK-ENDS SHOWING BI-SYMMETRICAL UNIT.

brass, copper, and wood work. The only difference being the process of application. The book-ends are to be covered with linen and decorated.



PAPER KNIFE PATTERNS SHOWING VARIATION OF FINISH FROM THE SAME FORM.

Design: The decoration for the book-ends and the paper knife should be formal in character: conventional nature units or abstract

OUTLINE FOR PENCIL OR PEN.

spots. If the class be well acquainted with simple bands and corner spots, something more difficult may be attempted. Try a bi-symetric unit for the entire surface. Cut a pattern of the form to be decorated, fold through the center vertically. Take a soft pencil or crayon and break this space, drawing lines and spots similar to the half space. Fold over on the other half and rub hard. This will give a pleasing and harmonious pattern for the entire surface. This may be stencilled on the book-end, and stained or carved on the knife handle.

MUSIC

GENERAL DISCUSSION.

The Value of Music.

Music holds an important relation to schools on account of its moral power. Among all classes of people in all periods and conditions of life, we recognize the mysterious influence of music. We see how it calms the troubled mind, how it sheds cheerfulness upon daily toil, how it revives the drooping spirit, how it adds zest to social amusement, how it carries the sweetest pleasures into the family circle, how it lifts the rapt soul from the dull plains of earth to the celestial mountains. The mother's lullaby that soothes the restless infant, the trumpet and drum that summon a crowd in the street, the merry glee that scatters joy amid the social gathering, the serenade that floats so sweetly on the evening air, the thrilling song that fires the patriot's soul amid the din of battle, the solemn hymn that soars to heaven wherever Christians meet, all reveal the mighty power of music. It saves the people from boistrous and riotous passions; pervading all classes it softens and refines the national character. Nowhere can its power be exerted more happily than in the school room.

Singing has a place in the school not only because of its cultural and disciplinary value, but also because it furnishes the child a means of expression and enjoyment that it unexcelled.

The child is a creature of impulse rather than of reason, and possesses a strong emotional nature. Music meets the demands of that nature, it infuses itself into his life, entwines itself around his heart and becomes a law of his being. Hence his songs may give tone and direction to his moral character. Some one has noticed that upon the introduction of music into the public schools of a certain town, the number of low and trashy songs heard among children on the streets sensibly decreased.

Music aids in school discipline. In opening exercises it overcomes the turbulence of the boy and acts as a safety-valve; it brings the interval between muscular and mental activity; it calms the irritability following confinement and protracted study, and prepares the way for more study; it furnishes the child a means of expression and enjoyment not offered by any other branch of instruction.

The Method of Teaching Music.

No method of musical instruction in public schools is worthy of commendation which does not lead directly to the attainment on the part of the pupil of five objects, viz: a desire to sing; the ability to read music readily at sight; the improvement of the singing voice; a knowledge of good music by the best composers; and the ability to sing with feeling and expression. Musical instruction in the schools is not intended merely as a pastime. Although much pleasure is derived from spontaneous singing, unless the children learn to read music intelligently, the work is in a great degree a failure. Thousands of people give up the practice of singing because they cannot read music. The rote singer is obliged to spend much time in learning each piece before he arrives at the beginning place of the sight singer, to whom fresh fields are ever open, and higher and better music is always at his command. To borrow an illustration: Suppose two persons recite equally well a poem in German. The one has merely learned this one piece and may be ignorant of its meaning; the other is a German scholar, and has at his command all the treasures of knowledge that are stored in the vast literature of the German language.

Children can be taught in the public schools to read music as skillfully as they read language. If this has not been accomplished in schools where music has been taught for years, it is due either to poor teaching, or to wrong methods.

Music should have a place in every school curriculum, and form a continuous prolonged course, beginning with the simplest rudiments and leading the child on by successive steps, systematic drill and much practice, until he can render and appreciate the highest grade of music of the best composers.

Music cannot reach its highest efficiency in the school unless the children learn to read it. The best singing is found in schools where the children read music well. Teaching the children to sing at sight does not defeat the real object for which music is taught, in fact, the ability to read music makes the pupil independent of his teacher and facilitates rather than retards his musical development.

Some people contend that the child's music sense is dulled by learning to read music, and therefore they put slight emphasis on music reading with the result that the children who are taught by their methods do not learn to read music at all. It is true that the child's music sense is first developed by the spontaneous singing of songs learned by imitation but it does not follow that imitative sing-

ing gives the child the ability to sing by note. It is true that rote singing is a necessary preparation for music reading just as learning to talk is a necessary preparation for language reading, but either case when the symbols are introduced there should be no doubt left in the child's mind as to their significance.

Reading is a matter of knowing and doing as well as feeling and it is foolish to contend that a child can learn to read solely through the exercise of his feelings and emotions. While imitative singing awakens the music sense and leads directly into sight singing, the latter employs mental processes that are not employed when the child sings by ear, and unless he is trained in these particular processes he will never be able to interpret the printed page.

Music reading is not the ultimate end to be attained in school singing but it is a means of hastening the child's progress toward that end. The teaching of music reading holds the same relation to music education as the teaching of language reading holds to general education. It is, therefore a legitimate function of the public schools, which demands the teacher's most thoughtful and active attention.

Learning to read music is not, primarily, a reasoning or a problem solving process, it is a performance to be reduced to automatism by a great deal of practice. It involves principally the memory, the imagination, the music sense and the perceptive faculties. Children cannot learn to read music by the lecture method, nor by laborious and protracted drill on the separated elements of melody. "They learn to read by reading."

In teaching children to read music, the practice of singing songs directly from the notation is the best kind of drill for both the ear and the eye that can possibly be given. Such practice gives them a mastery of tone relation that cannot be obtained by merely practicing skips abstractly from the scale melody. The soundness of this principle has been demonstrated not only in music reading but in word reading. Instead of teaching the alphabet first and then drilling the children on the various combinations of elementary sounds, *before permitting them to read words,* as reading used to be taught, entire words in the form of sentences are presented at the beginning.

In school singing, the child's first musical experience should be with the song, his study of music should be based on the song, and song should be the object of his musical training. The success of music in the schools depends more on this principle than on the arbitrary practices of any particular "system." Children will work harder with songs than they will with exercises. Songs stimulate the music

sense, hold interest and leave lasting impressions. A dreary page of barren exercises makes no such appeal.

The preliminary practice of singing by syllable songs already learned by ear while looking at the notes, is for the purpose of familiarizing the child with the staff notation and leading him to recognize tone relation *in the song* where it was originally discovered.

The song method presents the symbols of music in direct connection with the song just as the symbols of words are presented in direct connection with spoken language. "Children learn to read by reading," and they begin to read by beginning. It is unnecessary to delay them by dreary drill on dissociated elements in order to "lead up" to music reading.

The teacher should not stop to explain the notation in advance of the child's experience. As soon as he learns to see scale relation in melody, he has discovered the secret of reading music and he will learn the notation as he goes along.

Music reading should not be made a forced process with young children. They should grow naturally in learning to read just as they do in learning to talk. The songs should be so well adapted to the child's capabilities at any given stage that his progress is possible without frequent and discouraging interruptions.

Rote singing should not be discontinued when note singing begins. The children should be given an opportunity daily for spontaneous expression in song. This is the spirit of the song method, but rote singing and music reading should be so well balanced that rote singing will not prevent music reading as it often does when the teacher has no definite aim in view.

When the children are shown the way clearly they will work as hard in learning to read music as they do in learning to read language, provided they have interesting material to read. With good songs they can cultivate good tone, good expression and learn to read, all at the same time.

Material and Method.

A music course is best represented by the textbooks used. Schools vary to such an extent, even in cities where music instruction is well established, that a rigid course of study often proves to be a handicap to the teacher. With a well graded book the way is made plain to the teacher who can read music.

The Congdon Music Readers, which are the adopted text, to be used by the pupils, may be followed by any of the higher books

suggested below, which together with the Song Book issued by the State Department of Schools, furnish not only an abundance of material for study by note but also songs for all occasions as well as for daily exercises and spontaneous singing.

In schools where music reading is not well established, The Congdon First Reader (Primer) can be used as high as the fourth grade; the Second Reader as high as the sixth grade and the Third Reader as high as the eighth grade.

As these books are mastered in the higher grades they will gradually settle into the lower grades but in no instance should the Primer be used below the second grade. This elasticity of plan which is in harmony with the principles already stated, will prove to be the only practical method of adopting the music material to the needs of the schools. It opens a progressive road to music study without the limitation of a "cut and dried" course of study that holds some of the teachers back while, at the same time, it crowds others along faster than they can go.

With the ability to sing at sight music of the same difficulty as ordinary hymn tunes, the teacher is master of the situation; provided, of course that the school is properly equipped with the necessary books. The teacher who cannot read music should make it her business to learn as soon as possible, the daily lesson with the children is the teacher's opportunity for self-improvement.

The children are always ready to do their part, but from the very beginning and in all grades the teacher should insist on a perfectly smooth, light, pleasant tone. Forced tones are not only discordant but very injurious to the voice. The "head tone" quality should be learned by both teacher and pupils and established in every schoolroom.

In giving a lesson in music reading, the teacher should be on the guard constantly to prevent the children from singing by ear. If the class is not properly directed and the teacher does not hold them to singing by note, ear singing will prevail. Rote singing has its place but it should not occupy the period set apart for note singing.

The teacher will find it necessary to start the tunes often, but let the impluse of one phrase sung by the teacher (or a few bright pupils) carry the class through the next phrase by note. Or, let the impulse of one song learned by ear, carry the class through the next song by note.

All singing whether by note or by rote should be musical and melodious and in order to do this the teacher must "boost" frequently.

But too much boosting defeats music reading. It is so easy for both teacher and pupils to lapse into ear singing that effort in the right direction by the pupils is often hard to secure. Individual singing is necessary in order to secure good music reading. A dozen or more pupils can sing individually in two or three minutes, if the work is properly handled. Occasional songs and spontaneous singing as well as singing for pure enjoyment should be interspersed frequently in the daily program, but all classes above the first grade should sing by note for ten minutes each day without interruption.

Supplementary Books.

The following books are recommended to follow the Congdon Music Readers:

Book Two, Eleanor Smith Music Course, American Book Company, Boston, Mass.

or

Book Two, Progressive Music Course, Silver Burdett & Co., New York,

or

Book Two, The New Educational Music Course, Ginn & Co., Boston, Mass.

Following the above for upper grammar grades and High Schools:

The Laurel Music Reader or The School Song Book, C. C. Birchard & Co., Boston.

For rote singing in the primary grades:

Songs of a Little Child's Day by Eleanor Smith, Thos. Charles Co., Chicago.

Jessie Gaynor Books One & Two, Clayton F. Summy, Chicago, Ill.

The Songman's Pack by Nellie Poorman, Clayton F. Summy, Chicago, Ill.

BOOKKEEPING

Text: Montgomery's Modern Bookkeeping—Single Entry—Part I.

Time: Second half of eighth grade.

Bookkeeping can be taught best in connection with 7th and 8th grade arithmetic. However, if teachers think it necessary, they may teach it as a separate subject in the second half of the eighth grade. A set of blanks of five numbers to accompany Part I has been adopted.

GENERAL HISTORY.

Text: Myers' General History (Revised).

General History should not be taught in the elementary grades unless there is a strong demand for it. If taught at all the teacher should, if possible, teach it out of regular school hours, in the eighth grade.

If necessary to teach this subject the following suggestions may be found helpful.

(If general history is attempted in this grade, the course in United States history should be begun in the sixth grade and completed in the seventh, the manner of presenting it being simplified because of the younger age of the pupils.)

It will be best in general to follow the order of subjects as presented in the text used. The same general suggestions as to the subjects to be emphasized in the study of U. S. History will apply in this work. Also the suggestions as to the teaching of the history in the high school course. Social, industrial and economic conditions are as important as the progress in forms of government and the methods of warfare.

The manner of life of the people, their homes, dress, social diversions and amusements, family life, education, literature, art, religious beliefs and observances, agriculture, ownership of land, agricultural products, slavery, position of women, manufactures and commerce, all these topics will be found very fruitful and will well repay investigation.

Pupils should outline lessons and recite in the main by topics. Notebooks may be kept in which material gathered from other sources should be entered; maps should be studied carefully and

important events fixed definitely both in place and time. Study the illustrations in the book, they are meant to aid in the understanding of the text.

Compare one nation with another as to its development in civilization and note the constant progress of civilization toward a higher state. Trace the elements of our own civilization which have come to us from the various nations of the past. Show in what way the present is better than the past and what we may learn from the past of value to the present.